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# SEQUENCE LISTING

<110> Edinger, Shlomit R  
Gerlach, Valerie  
MacDougall, John R  
Malyankar, Muriel M  
Smithson, Glennda  
Millet, Isabelle  
Peyman, John A  
Stone, David J  
Gunther, Erik  
Ellerman, Karen  
Shimkets, Richard A  
Padigaru, Muralidhara  
Guo, Xiaojia  
Patturajan, Meera  
Taupier Jr, Raymond J  
Burgess, Catherine E  
Zerhusen, Bryan D  
Kekuda, Ramesh  
Spytek, Kimberly A  
Gangolli, Esha A  
Fernandes, Elma R  
Gorman, Linda

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Gly Lys Gly Arg Asp Met Asp Glu Ala Gly Asn His Arg Ser Gln Gln	100	105	110
Thr Asn Thr Gly Thr Glu Asn Gln Thr Leu His Val Leu Thr Gln Tyr	115	120	125
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<210> 6

<211> 856

<212> PRT

<213> Homo sapiens

<400> 6

Met Gly Pro Ala Ala Ala Ala Pro Gly Ser Pro Ser Val Pro Arg Pro

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Val Ser His Glu Ile Met His His Gln Arg Arg Arg Arg Ala Val Ala	35	40	45
Val Ser Glu Val Glu Pro Ala Phe Leu Gln Val Cys Arg Ala Arg Glu	50	55	60
Leu Arg Leu Cys Val Glu Ala Phe Pro Ile Ala Asn Ser Gln Pro Gly	65	70	75
Phe Leu Asn Leu Ser Asn Val Arg Ser His Trp Arg Glu Gln His Ala	85	90	95
Ser Lys Arg Ile Ile Thr Asn Ala Met Leu Gly Glu Ser Ala Leu Ala	100	105	110
Ser Thr Arg Lys Ser Asn Cys Val Phe Phe Leu Ser Phe Tyr Phe Phe	115	120	125
Gln Ser Gly Met Ile Arg Thr Glu Glu Ala Asp Tyr Phe Leu Arg Pro	130	135	140
Leu Pro Ser His Leu Ser Trp Lys Leu Gly Arg Ala Ala Gln Gly Ser	145	150	155
Ser Pro Ser His Val Leu Tyr Lys Arg Glu Val Leu Val Thr Ser Arg	165	170	175
Thr Trp Glu Leu Ala His Gln Pro Leu His Ser Ser Asp Leu Arg Leu	180	185	190
Gly Leu Pro Gln Lys Gln His Phe Cys Gly Arg Arg Lys Lys Tyr Met	195	200	205
Pro Gln Pro Pro Lys Glu Asp Leu Phe Ile Leu Pro Asp Glu Tyr Lys	210	215	220
Ser Cys Leu Arg His Lys Arg Ser Leu Leu Arg Ser His Arg Asn Glu	225	230	235
Glu Leu Asn Val Glu Thr Leu Val Val Val Asp Lys Lys Met Met Gln	245	250	255
Asn His Gly His Glu Asn Ile Thr Thr Tyr Val Leu Thr Ile Leu Asn	260	265	270
Met Val Ser Ala Leu Phe Lys Asp Gly Thr Ile Gly Gly Asn Ile Asn	275	280	285
Ile Ala Ile Val Gly Leu Ile Leu Leu Glu Asp Glu Gln Pro Gly Leu	290	295	300
Val Ile Ser His His Ala Asp His Thr Leu Ser Ser Phe Cys Gln Trp			

305		310		315		320
Gln Ser Gly Leu Met	Gly Lys Asp Gly Thr Arg His Asp His Ala Ile					
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Leu Leu Thr Gly Leu Asp Ile Cys Ser Trp Lys Asn Glu Pro Cys Asp						
	340		345		350	
Thr Leu Gly Phe Ala Pro Ile Ser Gly Met Cys Ser Lys Tyr Arg Ser						
	355		360		365	
Cys Thr Ile Asn Glu Asp Thr Gly Leu Gly Leu Ala Phe Thr Ile Ala						
	370		375		380	
His Glu Ser Gly His Asn Phe Gly Met Ile His Asp Gly Glu Gly Asn						
	385		390		395	400
Met Cys Lys Lys Ser Glu Gly Asn Ile Met Ser Pro Thr Leu Ala Gly						
	405		410		415	
Arg Asn Gly Val Phe Ser Trp Ser Pro Cys Ser Arg Gln Tyr Leu His						
	420		425		430	
Lys Phe Leu Ser Thr Ala Gln Ala Ile Cys Leu Ala Asp Gln Pro Lys						
	435		440		445	
Pro Val Lys Glu Tyr Lys Tyr Pro Glu Lys Leu Pro Gly Glu Leu Tyr						
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Gly Ala Asn Thr Gln Cys Lys Trp Gln Phe Gly Glu Lys Ala Lys Leu						
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Cys Met Leu Asp Phe Lys Lys Asp Ile Cys Lys Ala Leu Trp Cys His						
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Arg Ile Gly Arg Lys Cys Glu Thr Lys Phe Met Pro Ala Ala Glu Gly						
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Thr Ile Cys Gly His Glu His Gly Ala Gly Gly Gln Cys Val Lys Tyr						
	515		520		525	
Gly Asp Glu Gly Pro Lys Pro Thr His Gly His Trp Ser Asp Trp Ser						
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Ser Trp Ser Pro Cys Ser Arg Thr Cys Gly Gly Gly Val Ser His Arg						
	545		550		555	560
Ser Arg Ser Gln Asn Thr His Ser Arg Pro Ser His Gly Gly Lys Phe						
	565		570		575	
Cys Glu Gly Ser Thr Arg Thr Leu Lys Leu Cys Asn Ser Gln Lys Cys						
	580		585		590	
Pro Arg Asp Ser Val Asp Phe Arg Ala Ala Gln Cys Ala Glu His Asn						
	595		600		605	
Ser Arg Arg Phe Arg Gly Arg His Tyr Lys Trp Lys Pro Asp Gln Asp						

610	615	620
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Leu Ser Asn Lys Val Lys Asp Gly Thr Pro Cys Ser Glu Asp Ser Arg 645 650 655		
Asn Val Cys Ile Asp Gly Ile Cys Glu Arg Val Gly Cys Asp Asn Val 660 665 670		
Leu Gly Ser Asp Ala Val Glu Asp Val Cys Gly Val Cys Asn Gly Asn 675 680 685		
Asn Ser Ala Cys Thr Ile His Arg Gly Leu Tyr Leu Glu Tyr Tyr His 690 695 700		
Met Val Thr Ile Pro Ser Gly Ala Arg Ser Ile Arg Ile Tyr Glu Met 705 710 715 720		
Asn Val Ser Thr Ser Tyr Ile Ser Val Arg Asn Ala Leu Arg Arg Tyr 725 730 735		
Tyr Leu Asn Gly His Trp Thr Val Asp Trp Pro Gly Arg Tyr Lys Phe 740 745 750		
Ser Gly Thr Thr Phe Asp Tyr Arg Arg Ser Tyr Asn Glu Pro Glu Asn 755 760 765		
Leu Ile Ala Thr Gly Pro Thr Asn Glu Thr Leu Ile Val Glu Leu Leu 770 775 780		
Phe Gln Gly Arg Asn Pro Gly Val Ala Trp Glu Tyr Ser Met Pro Arg 785 790 795 800		
Leu Gly Thr Glu Lys Gln Pro Pro Ala Gln Pro Ser Tyr Thr Trp Ala 805 810 815		
Ile Val Arg Ser Glu Cys Ser Val Ser Cys Gly Gly Gly Arg Cys Leu 820 825 830		
Pro Val Leu Leu Leu Glu Ala Ala Cys Gln Pro Leu Ala Thr Ala Tyr 835 840 845		
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<210> 7

<211> 2895

<212> DNA

<213> Homo sapiens

<400> 7

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 tccggacagc tggaggcgag tccccgcgg ctcctctccc gcggaccccg ccgtctcacc 180

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<210> 8

<211> 952

<212> PRT

<213> Homo sapiens

<400> 8

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 35 40 45  
 Leu Ser Arg Gly Pro Arg Arg Leu Thr Ala Met Ser Pro Leu Phe Ser  
 50 55 60  
 Ala Gly Thr Cys Val Arg His Gly Thr Arg Ser Gly Ser Ala Trp Glu  
 65 70 75 80  
 Pro Glu Arg Pro Ala Ser Ser Ser Thr Arg Gly Ala Ala Gly Leu Asp  
 85 90 95  
 Gly Lys Gly Arg Asp Met Asp Glu Ala Gly Asn His Arg Ser Gln Gln  
 100 105 110  
 Thr Asn Thr Gly Thr Glu Asn Gln Thr Leu His Val Leu Thr Gln Tyr  
 115 120 125  
 Asp Leu Val Ser Ala Tyr Glu Val Asp His Arg Gly Asp Tyr Val Ser  
 130 135 140  
 His Glu Ile Met His His Gln Arg Arg Arg Arg Ala Val Ala Val Ser  
 145 150 155 160  
 Glu Val Glu Ser Leu His Leu Arg Leu Lys Gly Pro Arg His Asp Phe  
 165 170 175  
 His Met Asp Leu Arg Thr Ser Ser Ser Leu Val Ala Pro Gly Phe Ile  
 180 185 190  
 Val Gln Thr Leu Gly Lys Thr Gly Thr Lys Ser Val Gln Thr Leu Pro  
 195 200 205  
 Pro Glu Asp Phe Cys Phe Tyr Gln Gly Ser Leu Arg Ser His Arg Asn  
 210 215 220  
 Ser Pro Ser His Gly Gly Lys Phe Cys Glu Gly Ser Thr Arg Thr Leu  
 225 230 235 240  
 Lys Leu Cys Asn Ser Gln Lys Cys Pro Arg Asp Ser Val Asp Phe Arg  
 245 250 255  
 Ala Ala Gln Cys Ala Glu His Asn Ser Arg Arg Phe Arg Gly Arg His  
 260 265 270  
 Tyr Lys Trp Lys Pro Tyr Thr Gln Val Glu Ala Asp Leu Cys Lys Leu  
 275 280 285  
 Tyr Cys Ile Ala Glu Gly Phe Asp Phe Phe Phe Ser Leu Ser Asn Lys  
 290 295 300  
 Val Lys Asp Gly Thr Pro Cys Ser Glu Asp Ser Arg Asn Val Cys Ile  
 305 310 315 320



Asp	Gly	Ile	Cys	Glu	Leu	Ser	Val	Val	Ser	Thr	Ser	Ala	His	Met	Pro	325	330	335	
Gln	Pro	Pro	Lys	Glu	Asp	Leu	Phe	Ile	Leu	Pro	Asp	Glu	Tyr	Lys	Ser	340	345	350	
Cys	Leu	Arg	His	Lys	Arg	Ser	Leu	Leu	Arg	Ser	His	Arg	Asn	Glu	Glu	355	360	365	
Leu	Asn	Val	Glu	Thr	Leu	Val	Val	Val	Asp	Lys	Lys	Met	Met	Gln	Asn	370	375	380	
His	Gly	His	Glu	Asn	Ile	Thr	Thr	Tyr	Val	Leu	Thr	Ile	Leu	Asn	Met	385	390	395	400
Val	Ser	Ala	Leu	Phe	Lys	Asp	Gly	Leu	Met	Gly	Lys	Asp	Gly	Thr	Arg	405	410	415	
His	Asp	His	Ala	Ile	Leu	Leu	Thr	Gly	Leu	Asp	Ile	Cys	Ser	Trp	Lys	420	425	430	
Asn	Glu	Pro	Cys	Asp	Thr	Leu	Gly	Phe	Ala	Pro	Ile	Ser	Gly	Met	Cys	435	440	445	
Ser	Lys	Tyr	Arg	Ser	Cys	Thr	Ile	Asn	Glu	Asp	Thr	Gly	Leu	Gly	Leu	450	455	460	
Ala	Phe	Thr	Ile	Ala	His	Glu	Ser	Gly	His	Asn	Phe	Gly	Met	Ile	His	465	470	475	480
Asp	Gly	Glu	Gly	Asn	Met	Cys	Lys	Lys	Ser	Glu	Gly	Asn	Ile	Met	Ser	485	490	495	
Pro	Thr	Leu	Ala	Gly	Arg	Asn	Gly	Val	Phe	Ser	Trp	Ser	Pro	Cys	Ser	500	505	510	
Arg	Gln	Tyr	Leu	His	Lys	Phe	Leu	Ser	Thr	Ala	Gln	Ala	Ile	Cys	Leu	515	520	525	
Ala	Asp	Gln	Pro	Lys	Pro	Val	Lys	Glu	Tyr	Lys	Tyr	Pro	Glu	Lys	Leu	530	535	540	
Pro	Gly	Glu	Leu	Tyr	Asp	Ala	Asn	Thr	Gln	Cys	Lys	Trp	Gln	Phe	Gly	545	550	555	560
Glu	Lys	Ala	Lys	Leu	Cys	Met	Leu	Asp	Phe	Lys	Lys	Asp	Ile	Cys	Lys	565	570	575	
Ala	Leu	Trp	Cys	His	Arg	Ile	Gly	Arg	Lys	Cys	Glu	Thr	Lys	Phe	Met	580	585	590	
Pro	Ala	Ala	Glu	Gly	Thr	Ile	Cys	Gly	His	Asp	Met	Trp	Cys	Arg	Gly	595	600	605	
Gly	Gln	Cys	Val	Lys	Tyr	Gly	Asp	Glu	Gly	Pro	Lys	Pro	Thr	His	Gly	610	615	620	

His	Trp	Ser	Asp	Trp	Ser	Ser	Trp	Ser	Pro	Cys	Ser	Arg	Thr	Cys	Gly	625	630	635	640
Gly	Gly	Val	Ser	His	Arg	Ser	Arg	Leu	Cys	Thr	Asn	Pro	Lys	Pro	Ser	645	650	655	
His	Gly	Gly	Lys	Phe	Cys	Glu	Gly	Ser	Thr	Arg	Thr	Leu	Lys	Leu	Cys	660	665	670	
Asn	Ser	Gln	Lys	Cys	Pro	Arg	Asp	Ser	Val	Asp	Phe	Arg	Ala	Ala	Gln	675	680	685	
Cys	Ala	Glu	His	Asn	Ser	Arg	Arg	Phe	Arg	Gly	Arg	His	Tyr	Lys	Trp	690	695	700	
Lys	Pro	Tyr	Thr	Gln	Val	Glu	Asp	Gln	Asp	Leu	Cys	Lys	Leu	Tyr	Cys	705	710	715	720
Ile	Ala	Glu	Gly	Phe	Asp	Phe	Phe	Phe	Ser	Leu	Ser	Asn	Lys	Val	Lys	725	730	735	
Asp	Gly	Thr	Pro	Cys	Ser	Glu	Asp	Ser	Arg	Asn	Val	Cys	Ile	Asp	Gly	740	745	750	
Ile	Cys	Glu	Arg	Val	Gly	Cys	Asp	Asn	Val	Leu	Gly	Ser	Asp	Ala	Val	755	760	765	
Glu	Asp	Val	Cys	Gly	Val	Cys	Asn	Gly	Asn	Asn	Ser	Ala	Cys	Thr	Ile	770	775	780	
His	Arg	Gly	Leu	Tyr	Thr	Lys	His	His	His	Thr	Asn	Gln	Tyr	Tyr	His	785	790	795	800
Met	Val	Thr	Ile	Pro	Ser	Gly	Ala	Arg	Ser	Ile	Arg	Ile	Tyr	Glu	Met	805	810	815	
Asn	Val	Ser	Thr	Ser	Tyr	Ile	Ser	Val	Arg	Asn	Ala	Leu	Arg	Arg	Tyr	820	825	830	
Tyr	Leu	Asn	Gly	His	Trp	Thr	Val	Asp	Trp	Pro	Gly	Arg	Tyr	Lys	Phe	835	840	845	
Ser	Gly	Thr	Thr	Phe	Asp	Tyr	Arg	Arg	Ser	Tyr	Asn	Glu	Pro	Glu	Asn	850	855	860	
Leu	Ile	Ala	Thr	Gly	Pro	Thr	Asn	Glu	Thr	Leu	Ile	Val	Glu	Leu	Leu	865	870	875	880
Phe	Gln	Gly	Arg	Asn	Pro	Gly	Val	Ala	Trp	Glu	Tyr	Ser	Met	Pro	Arg	885	890	895	
Leu	Gly	Thr	Glu	Lys	Gln	Pro	Pro	Ala	Gln	Pro	Ser	Tyr	Thr	Trp	Ala	900	905	910	
Ile	Val	Arg	Ser	Glu	Cys	Ser	Val	Ser	Cys	Gly	Gly	Gly	Arg	Cys	Leu	915	920	925	

Pro Val Leu Leu Leu Glu Ala Ala Cys Gln Pro Ser Ala Thr Ala Tyr  
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Ile Ala Leu Ala Phe Leu Glu Ser  
 945 950

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 <211> 4488  
 <212> DNA  
 <213> Homo sapiens

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Phe Pro Ser Val Gln Lys Val Cys Leu Asp Leu Ser Pro Gly Tyr Ser
      35                      40                      45

Asp Val Lys Phe Thr Val Thr Leu Glu Thr Lys Asp Lys Thr Gln Lys
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Leu Leu Glu Tyr Ser Gly Leu Lys Lys Arg His Leu His Cys Ile Ser
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Phe Leu Val Pro Pro Pro Ala Gly Gly Thr Glu Glu Val Ala Thr Ile
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Pro	Leu	Tyr	Thr	Pro	Gly	Gln	Gln	Val	Tyr	Phe	Arg	Ile	Val	Thr	Met	130	135	140
Asp	Ser	Asn	Phe	Val	Pro	Val	Asn	Asp	Lys	Tyr	Ser	Met	Val	Glu	Leu	145	150	155
Gln	Asp	Pro	Asn	Ser	Asn	Arg	Ile	Ala	Gln	Trp	Leu	Glu	Val	Val	Pro	165	170	175
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Phe	Ser	Val	Glu	Glu	Tyr	Val	Leu	Ser	Pro	Phe	Leu	Leu	Leu	Leu	Ser	210	215	220
Ser	Val	Leu	Pro	Lys	Phe	Lys	Val	Glu	Val	Val	Glu	Pro	Lys	Glu	Leu	225	230	235
Ser	Thr	Val	Gln	Glu	Ser	Phe	Leu	Val	Lys	Ile	Cys	Cys	Arg	Tyr	Thr	245	250	255
Tyr	Gly	Lys	Pro	Met	Leu	Gly	Ala	Val	Gln	Val	Ser	Val	Cys	Gln	Lys	260	265	270
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His	Gln	Ile	Asn	Ile	Val	Ala	Thr	Val	Val	Glu	Glu	Gly	Thr	Gly	Val	325	330	335
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Pro Trp Gly Ile Ala Val Gly Leu Leu Cys Gln Phe Gly Leu Met Pro  
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Gln Gln Asn Leu Thr Ile Pro Tyr Gln Asn Ile Gly Leu Ser Leu Gly  
145 150 155 160  
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195 200 205  
Lys Gly Ser Trp Asn Ser Asp Ile Thr Leu Leu Thr Ile Ser Phe Ile  
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225 230 235 240  
His Gln Ser Trp Gln Arg Thr Leu Pro Ile Phe Leu Gly Leu Ala Phe

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Ser Arg Leu Ile Tyr Ala Phe Ile Pro Leu Leu Tyr Gly Leu Phe Gln					
	275		280		285
Leu Ile Asp Gly Phe Leu Ile Val Glu Glu Arg Thr Glu Asp Thr Asp					
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Cys Asp Gly Ser Pro Leu Pro Glu Tyr Phe Thr Glu Val Thr Ile Ile					
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 gcaagctgga agctgtggag gacatcacct accagctttt acgctctcgg aacatcacct 780  
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 cacctccgag 850

<210> 14  
 <211> 272  
 <212> PRT  
 <213> Homo sapiens

<400> 14  
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 20 25 30  
 Gly His Arg Ala Val Val Phe Asp Arg Phe Arg Gly Val Gln Asp Ile  
 35 40 45  
 Val Val Gly Lys Gly Thr His Cys Leu Ile Pro Trp Leu Gln Lys Ser

50	55	60
Ile Ile Phe Asp Cys Arg Ser Gln Pro Arg Asn Val Pro Val Ile Thr 65 70 75 80		
Gly Ser Lys Asp Leu Gln Asn Val Asn Leu Thr Leu Arg Ile Ile Phe 85 90 95		
Arg Pro Val Ala Ser Gln Leu Pro His Ile Phe Thr Ser Ser Gly Glu 100 105 110		
Asp His Asp Glu Arg Val Pro Pro Ser Ile Thr Asn Lys Ile Leu Lys 115 120 125		
Ser Val Val Ala Arg Phe Glu Ala Gly Glu Leu Ile Thr Gln Arg Glu 130 135 140		
Gln Ile Ser Arg Gln Val Ser Asp Asp Leu Thr Glu Pro Ala Ala Thr 145 150 155 160		
Phe Gly Leu Ile Leu Asp Asp Val Ser Leu Thr Tyr Leu Thr Phe Gly 165 170 175		
Lys Glu Phe Ile Glu Ala Val Glu Ala Lys Gln Ile Ala Gln Gln Glu 180 185 190		
Ala Glu Arg Ala Arg Phe Val Val Glu Lys Ala Glu Gln Gln Lys Lys 195 200 205		
Ala Ala Ile Ile Ser Ala Glu Gly Asp Ser Lys Val Ala Glu Leu Ile 210 215 220		
Thr Asn Ser Leu Ala Thr Ala Gly Asp Ala Leu Ile Glu Leu Arg Lys 225 230 235 240		
Leu Glu Ala Val Glu Asp Ile Thr Tyr Gln Leu Leu Arg Ser Arg Asn 245 250 255		
Ile Thr Tyr Leu Arg Ala Gly Gln Ser Met Pro Leu Gln Leu Arg Trp 260 265 270		

<210> 15  
 <211> 2011  
 <212> DNA  
 <213> Homo sapiens

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 caccagcacc ccttcgagcc gggcaagtgc ctcgaccaag gtctggacga caactattgc 720  
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 aaggtcatga gactgggtta ggcccagcct t 2011

<210> 16  
 <211> 666  
 <212> PRT  
 <213> Homo sapiens

<400> 16  
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 Glu Leu Gln His Leu Leu His Ala Val Val Pro Gly Pro Trp Gln Glu  
 35 40 45  
 Asp Val Ala Asp Ala Glu Glu Cys Ala Gly Arg Cys Gly Pro Leu Met  
 50 55 60  
 Asp Cys Arg Ala Phe His Tyr Asn Val Ser Ser His Gly Cys Gln Leu  
 65 70 75 80  
 Leu Pro Trp Thr Gln His Ser Pro His Thr Arg Leu Arg Arg Ser Gly  
 85 90 95  
 Arg Cys Asp Leu Phe Gln Lys Lys Asp Tyr Val Arg Thr Cys Ile Met  
 100 105 110

Asn	Asn	Gly	Val	Gly	Tyr	Arg	Gly	Thr	Met	Ala	Thr	Thr	Val	Gly	Gly	115	120	125
Leu	Pro	Cys	Gln	Ala	Trp	Ser	His	Lys	Phe	Pro	Asn	Asp	His	Lys	Tyr	130	135	140
Thr	Pro	Thr	Leu	Arg	Asn	Gly	Leu	Glu	Glu	Asn	Phe	Cys	Arg	Asn	Pro	145	150	155
Asp	Gly	Asp	Pro	Gly	Gly	Pro	Trp	Cys	Tyr	Thr	Thr	Asp	Pro	Ala	Val	165	170	175
Arg	Phe	Gln	Ser	Cys	Gly	Ile	Lys	Ser	Cys	Arg	Glu	Ala	Ala	Cys	Val	180	185	190
Trp	Cys	Asn	Gly	Glu	Glu	Tyr	Arg	Gly	Ala	Val	Asp	Arg	Thr	Glu	Ser	195	200	205
Gly	Arg	Glu	Cys	Gln	Arg	Trp	Asp	Leu	Gln	His	Pro	His	Gln	His	Pro	210	215	220
Phe	Glu	Pro	Gly	Lys	Phe	Leu	Asp	Gln	Gly	Leu	Asp	Asp	Asn	Tyr	Cys	225	230	235
Arg	Asn	Pro	Asp	Gly	Ser	Glu	Arg	Pro	Trp	Cys	Tyr	Thr	Thr	Asp	Pro	245	250	255
Gln	Ile	Glu	Arg	Glu	Phe	Cys	Asp	Leu	Pro	Arg	Cys	Gly	Ser	Glu	Ala	260	265	270
Gln	Pro	Arg	Gln	Glu	Ala	Thr	Thr	Val	Ser	Cys	Phe	Arg	Gly	Lys	Gly	275	280	285
Glu	Gly	Tyr	Arg	Gly	Thr	Ala	Asn	Thr	Thr	Thr	Ala	Gly	Val	Pro	Cys	290	295	300
Gln	Arg	Trp	Asp	Ala	Gln	Ile	Pro	His	Gln	His	Arg	Phe	Thr	Pro	Glu	305	310	315
Lys	Tyr	Ala	Cys	Lys	Asp	Leu	Arg	Glu	Asn	Phe	Cys	Arg	Asn	Pro	Asp	325	330	335
Gly	Ser	Glu	Ala	Pro	Trp	Cys	Phe	Thr	Leu	Arg	Pro	Gly	Met	Arg	Ala	340	345	350
Ala	Phe	Cys	Tyr	Gln	Ile	Arg	Arg	Cys	Thr	Asp	Asp	Val	Arg	Pro	Gln	355	360	365
Thr	Ala	Thr	Thr	Ala	Gln	Gly	Ser	Ser	Thr	Ala	Ala	Arg	Ser	Ala	Arg	370	375	380
Pro	Ala	Arg	Val	Ser	Ser	Ala	Ser	Ala	Gly	Pro	Leu	Arg	Arg	Arg	Thr	385	390	395
Ser	Arg	Ser	Ser	Arg	Leu	Pro	Pro	Asn	Arg	Met	His	Asn	Trp	Arg	Arg	405	410	415

Thr Ser Ala Gly Thr Gln Met Gly Ile Ala Met Gly Pro Gly Ala Thr  
 420 425 430  
 Arg Trp Thr Gln Gly Pro His Ser Thr Thr Val Pro Cys Asp Ala Ala  
 435 440 445  
 Leu Met Thr Ser Arg His Gln Ser Trp Thr Pro Gln Thr Arg Cys Ser  
 450 455 460  
 Leu Arg Ser Val Ala Arg Gly Trp Ile Gly Trp Ile Ser Gly Val Pro  
 465 470 475 480  
 Ser Cys Ala Trp Leu Gly Ala Ile Arg Ala Thr His Pro Gly Gln Ser  
 485 490 495  
 Ala Cys Gly Ile Gly Met Leu Pro Leu Thr Gly Tyr Glu Val Trp Leu  
 500 505 510  
 Gly Thr Leu Phe Gln Asn Pro Gln His Gly Glu Pro Ser Leu Gln Arg  
 515 520 525  
 Val Pro Val Ala Lys Met Val Cys Gly Pro Ser Gly Ser Gln Leu Val  
 530 535 540  
 Leu Leu Lys Leu Glu Arg Ser Val Thr Leu Asn Gln Arg Val Ala Leu  
 545 550 555 560  
 Ile Cys Leu Pro Pro Glu Trp Tyr Val Val Pro Pro Gly Thr Lys Cys  
 565 570 575  
 Glu Ile Ala Gly Trp Gly Glu Thr Lys Gly Thr Gly Asn Asp Thr Val  
 580 585 590  
 Leu Asn Val Ala Leu Leu Asn Val Ile Ser Asn Gln Glu Cys Asn Ile  
 595 600 605  
 Lys His Arg Gly Arg Gly Asp Tyr Gly Gly Pro Leu Ala Cys Phe Thr  
 610 615 620  
 His Asn Cys Trp Val Leu Glu Gly Ile Ile Ile Pro Asn Arg Val Cys  
 625 630 635 640  
 Ala Arg Ser Cys Trp Pro Ala Val Phe Thr Arg Val Ser Val Phe Val  
 645 650 655  
 Asp Trp Ile His Lys Val Met Arg Leu Gly  
 660 665

<210> 17

<211> 634

<212> DNA

<213> Homo sapiens

<400> 17

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tacatgaagg agggaggagt gggaactgct ttgcgaaaaa tggacgcaat ggccaagcca 180  
gattgtatca tcacttgtga tggcaaaaac ctcaccataa aaaccgagag cactttgaaa 240  
acacagtttt cttgtaccct gggagagaag tttgaagaaa ccacagctga tggcagaaaa 300  
actcagactg tgtgcagctt tgcagatggt gcattgggtc agcatcagga gtgggatggg 360  
aaggaaaaca caataacaag aaaactgaaa gatgggaaat tagtggtgta ctgtgtcatg 420  
aacaatgtcg cctgtactcg gatctatgaa aaagtagaat aaaaattcca tcatcacttt 480  
ggacaggagt taactaatag aatgatcaag ctcagttcaa tgagcaaadc tccatagtgt 540  
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aagtgtcttg gattaattag gatcatccct ttgg 634

<210> 18  
<211> 134  
<212> PRT  
<213> Homo sapiens

<400> 18  
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Arg Lys Met Asp Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp  
35 40 45  
Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Gln Phe  
50 55 60  
Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly Arg  
65 70 75 80  
Lys Thr Gln Thr Val Cys Ser Phe Ala Asp Gly Ala Leu Val Gln His  
85 90 95  
Gln Glu Trp Asp Gly Lys Glu Asn Thr Ile Thr Arg Lys Leu Lys Asp  
100 105 110  
Gly Lys Leu Val Val Tyr Cys Val Met Asn Asn Val Ala Cys Thr Arg  
115 120 125  
Ile Tyr Glu Lys Val Glu  
130

<210> 19  
<211> 822  
<212> DNA  
<213> Homo sapiens

<400> 19  
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ccccaacgtc tgctatgacg agttcttccc cgtgtccac gtgcgcctct gggccctaca 240  
gtcatcctg gtcacgtgcc cctcactgct cgtgggtcatg cacgtggcct accgcgagga 300  
acgcgagcgc aagcaccacc tgaaacacgg gcccaatgcc ccgtccctgt acgacaacct 360



gagcaagaag cggggcggac tgtggtggac gtacttgctg agcctcatct tcaaggccgc 420  
cgtggatgct ggcttctctt atatcttcca ccgctctac aaggattatg acatgccccg 480  
cgtggtggcc tgctccgtgg agccttgccc ccacactgtg gactgttaca tctcccgccc 540  
cacggagaag aaggtcttca cctacttcat ggtgaccaca gctgccatct gcatactgct 600  
caacctcagt gaagtcttct acctggtggg caagaggtgc atggagatct tcggccccag 660  
gcaccggcgg cctcggtgcc gggaatgcct acccgatacg tgcccacat atgtcctctc 720  
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<210> 20

<211> 266

<212> PRT

<213> Homo sapiens

<400> 20

Met Asn Trp Ala Phe Leu Gln Gly Leu Leu Ser Gly Val Asn Lys Tyr  
1 5 10 15

Ser Thr Val Leu Ser Arg Ile Trp Leu Ser Val Val Phe Ile Phe Arg  
20 25 30

Val Leu Val Tyr Val Val Ala Ala Glu Glu Val Trp Asp Asp Glu Gln  
35 40 45

Lys Asp Phe Val Cys Asn Thr Lys Gln Pro Gly Cys Pro Asn Val Cys  
50 55 60

Tyr Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln  
65 70 75 80

Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala  
85 90 95

Tyr Arg Glu Glu Arg Glu Arg Lys His His Leu Lys His Gly Pro Asn  
100 105 110

Ala Pro Ser Leu Tyr Asp Asn Leu Ser Lys Lys Arg Gly Gly Leu Trp  
115 120 125

Trp Thr Tyr Leu Leu Ser Leu Ile Phe Lys Ala Ala Val Asp Ala Gly  
130 135 140

Phe Leu Tyr Ile Phe His Arg Leu Tyr Lys Asp Tyr Asp Met Pro Arg  
145 150 155 160

Val Val Ala Cys Ser Val Glu Pro Cys Pro His Thr Val Asp Cys Tyr  
165 170 175

Ile Ser Arg Pro Thr Glu Lys Lys Val Phe Thr Tyr Phe Met Val Thr  
180 185 190

Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Ser Glu Val Phe Tyr Leu  
195 200 205

Val Gly Lys Arg Cys Met Glu Ile Phe Gly Pro Arg His Arg Arg Pro  
210 215 220

Arg Cys Arg Glu Cys Leu Pro Asp Thr Cys Pro Pro Tyr Val Leu Ser  
 225 230 235 240

Gln Gly Gly His Pro Glu Asp Gly Asn Ser Val Leu Met Lys Ala Gly  
 245 250 255

Ser Ala Pro Val Asp Ala Gly Gly Tyr Pro  
 260 265

<210> 21  
 <211> 546  
 <212> DNA  
 <213> Homo sapiens

<400> 21  
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 agaacagaga aaatacgtag caacatttca ttaagttgaa ttctaatact taaaaggctc 420  
 cttttagtag tgacattctg gattttaaaa gttatgttga ccgcatgttc tcaactcaca 480  
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 tgtcag 546

<210> 22  
 <211> 61  
 <212> PRT  
 <213> Homo sapiens

<400> 22  
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Trp Phe Thr Leu Leu Arg Glu Gln Cys Lys Cys Leu Gln Glu Ala Ile  
 20 25 30

His Tyr Leu Asn Ile Arg Tyr Arg Cys Ser Lys Ala Ala Thr Ser Val  
 35 40 45

Met Arg Thr Glu Lys Ile Arg Ser Asn Ile Ser Leu Ser  
 50 55 60

<210> 23  
 <211> 2309  
 <212> DNA  
 <213> Homo sapiens

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<400> 23

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<210> 24

<211> 547

<212> PRT

<213> Homo sapiens

<400> 24

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His Thr Gln Trp Gly Ile Asp Phe Leu Glu Arg Tyr Ala Lys Phe Val
      20              25              30

Lys Glu Arg Ile Glu Ile Glu Gln Asn Tyr Ala Lys Gln Leu Arg Asn
      35              40              45

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Ile Asp Glu Leu Asn Arg Glu Leu Gln Lys Glu Ser Asp Gln Lys Asp  
 355 360 365  
 Ala Leu Asn Lys Met Lys Asp Val Tyr Glu Lys Asp Pro Gln Met Gly  
 370 375 380  
 Asp Pro Gly Ser Leu Gln Pro Lys Leu Ala Glu Thr Met Asn Asn Ile  
 385 390 395 400  
 Asp Arg Leu Arg Met Glu Ile His Lys Asn Glu Ala Trp Leu Ser Glu  
 405 410 415  
 Val Glu Gly Lys Thr Gly Gly Arg Gly Asp Arg Arg His Ser Ser Asp  
 420 425 430  
 Ile Asn His Leu Val Thr Gln Gly Arg Glu Ser Pro Glu Gly Ser Tyr  
 435 440 445  
 Thr Asp Asp Ala Asn Gln Glu Val Arg Gly Pro Pro Gln Gln His Gly  
 450 455 460  
 His His Asn Glu Phe Asp Asp Glu Phe Glu Asp Asp Asp Pro Leu Pro  
 465 470 475 480  
 Ala Ile Gly His Cys Lys Ala Ile Tyr Pro Phe Asp Gly His Asn Glu  
 485 490 495  
 Gly Thr Leu Ala Met Lys Glu Gly Glu Val Leu Tyr Ile Ile Glu Glu  
 500 505 510  
 Asp Lys Gly Asp Gly Trp Thr Arg Ala Arg Arg Gln Asn Gly Glu Glu  
 515 520 525  
 Gly Tyr Val Pro Thr Ser Tyr Ile Asp Val Thr Leu Glu Lys Asn Ser  
 530 535 540  
 Lys Gly Ser  
 545

<210> 25  
 <211> 1787  
 <212> DNA  
 <213> Homo sapiens

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<210> 26

<211> 1787

<212> DNA

<213> Homo sapiens

<400> 26

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1787

<210> 27

<211> 472

<212> PRT

<213> Homo sapiens

<400> 27

Met Ser Leu Met Leu Asp Asp Gln Pro Pro Met Glu Ala Gln Tyr Ala  
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Glu Glu Gly Pro Gly Pro Gly Ile Phe Arg Ala Glu Pro Gly Asp Gln  
20 25 30

Gln His Pro Ile Ser Gln Ala Val Cys Trp Arg Ser Met Arg Arg Gly  
35 40 45

Cys Ala Val Leu Gly Ala Leu Gly Leu Leu Ala Gly Ala Gly Val Gly  
50 55 60

Ser Trp Leu Leu Val Leu Tyr Leu Cys Pro Ala Ala Ser Gln Pro Ile  
65 70 75 80

Ser Gly Thr Leu Gln Asp Glu Glu Ile Thr Leu Ser Cys Ser Glu Ala  
85 90 95

Ser Ala Glu Glu Ala Leu Leu Pro Ala Leu Pro Lys Thr Val Ser Phe  
100 105 110

Arg Ile Asn Ser Glu Asp Phe Leu Leu Glu Ala Gln Val Arg Asp Gln  
115 120 125

Pro Arg Trp Leu Leu Val Cys His Glu Gly Trp Ser Pro Ala Leu Gly  
130 135 140

Leu Gln Ile Cys Trp Ser Leu Gly His Leu Arg Leu Thr His His Lys  
145 150 155 160

Gly Val Asn Leu Thr Asp Ile Lys Leu Asn Ser Ser Gln Glu Phe Ala  
165 170 175

Gln Leu Ser Pro Arg Leu Gly Gly Phe Leu Glu Glu Ala Trp Gln Pro  
180 185 190

Ser Arg Thr Thr Glu Ala Val Arg Asn Asn Cys Thr Ser Gly Gln Val  
195 200 205

Val Ser Leu Arg Cys Ser Glu Cys Gly Ala Arg Pro Leu Ala Ser Arg  
210 215 220

Ile Val Gly Gly Gln Ser Val Ala Pro Gly Arg Trp Pro Trp Gln Ala  
225 230 235 240

Ser Val Ala Leu Gly Phe Arg His Thr Cys Gly Gly Ser Val Leu Ala  
245 250 255

Pro Arg Trp Val Val Thr Ala Ala His Cys Met His Ser Phe Arg Leu  
                   260                                  265                                  270  
 Ala Arg Leu Ser Ser Trp Arg Val His Ala Gly Leu Val Ser His Ser  
                   275                                  280                                  285  
 Ala Val Arg Pro His Gln Gly Ala Leu Val Glu Arg Ile Ile Pro His  
                   290                                  295                                  300  
 Pro Leu Tyr Ser Ala Gln Asn His Asp Tyr Asp Val Ala Leu Leu Arg  
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 Leu Gln Thr Ala Leu Asn Phe Ser Asp Thr Val Gly Ala Val Cys Leu  
                                   325                                  330                                  335  
 Pro Ala Lys Glu Gln His Phe Pro Lys Gly Ser Arg Cys Trp Val Ser  
                   340                                  345                                  350  
 Gly Trp Gly His Thr His Pro Ser His Thr Tyr Ser Ser Asp Met Leu  
                   355                                  360                                  365  
 Gln Asp Thr Val Val Pro Leu Leu Ser Thr Gln Leu Cys Asn Ser Ser  
                   370                                  375                                  380  
 Cys Val Tyr Ser Gly Ala Leu Thr Pro Arg Met Leu Cys Ala Gly Tyr  
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 Leu Asp Gly Arg Ala Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu  
                                   405                                  410                                  415  
 Val Cys Pro Asp Gly Asp Thr Trp Arg Leu Val Gly Val Val Ser Trp  
                   420                                  425                                  430  
 Gly Arg Gly Cys Ala Glu Pro Asn His Pro Gly Val Tyr Ala Lys Val  
                   435                                  440                                  445  
 Ala Glu Phe Leu Asp Trp Ile His Asp Thr Ala Gln Val Ser Val Gly  
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 Ala Gly Val Gly Gln Gly Asp Phe  
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<210> 28

<211> 2148

<212> DNA

<213> Homo sapiens

<400> 28

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<210> 29

<211> 418

<212> PRT

<213> Homo sapiens

<400> 29

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Glu Glu Gly Pro Gly Pro Gly Ile Phe Arg Ala Glu Pro Gly Asp Gln
          20                      25                      30

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Gln His Pro Ile Ser Gln Ala Val Cys Trp Arg Ser Met Arg Arg Gly
          35                      40                      45

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Cys Ala Val Leu Gly Ala Leu Gly Leu Leu Ala Gly Ala Gly Val Gly
          50                      55                      60

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Ser Trp Leu Leu Val Leu Tyr Leu Cys Pro Ala Ala Ser Gln Pro Ile
          65                      70                      75                      80

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```

Ser Gly Thr Leu Gln Asp Glu Glu Ile Thr Leu Ser Cys Ser Glu Ala
          85                      90                      95

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Ser Ala Glu Glu Ala Leu Leu Pro Ala Leu Pro Lys Thr Val Ser Phe
          100                     105                     110

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Arg	Ile	Asn	Ser	Glu	Asp	Phe	Leu	Leu	Glu	Ala	Gln	Val	Arg	Asp	Gln	
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	130					135					140					
Leu	Gln	Ile	Cys	Trp	Ser	Leu	Gly	His	Leu	Arg	Leu	Thr	His	His	Lys	
145					150					155					160	
Gly	Val	Asn	Leu	Thr	Asp	Ile	Lys	Leu	Asn	Ser	Ser	Gln	Glu	Phe	Ala	
				165					170					175		
Gln	Leu	Ser	Pro	Arg	Leu	Gly	Gly	Phe	Leu	Glu	Glu	Ala	Trp	Gln	Pro	
			180					185						190		
Arg	Asn	Asn	Cys	Thr	Ser	Gly	Gln	Val	Val	Ser	Leu	Arg	Cys	Ser	Glu	
		195					200						205			
Cys	Gly	Ala	Arg	Pro	Leu	Ala	Ser	Arg	Ile	Val	Gly	Gly	Gln	Ser	Val	
	210					215					220					
Ala	Pro	Gly	Arg	Trp	Pro	Trp	Gln	Ala	Ser	Val	Ala	Leu	Gly	Phe	Arg	
225					230					235					240	
His	Thr	Cys	Gly	Gly	Ser	Val	Leu	Ala	Pro	Arg	Trp	Val	Val	Thr	Ala	
				245					250					255		
Ala	His	Cys	Met	His	Ser	Ala	Gln	Asn	His	Asp	Tyr	Asp	Val	Ala	Leu	
			260					265					270			
Leu	Arg	Leu	Gln	Thr	Ala	Leu	Asn	Phe	Ser	Asp	Thr	Val	Gly	Ala	Val	
		275					280						285			
Cys	Leu	Pro	Ala	Lys	Glu	Gln	His	Phe	Pro	Lys	Gly	Ser	Arg	Cys	Trp	
	290					295					300					
Val	Ser	Gly	Trp	Cys	His	Thr	His	Pro	Ser	His	Thr	Tyr	Ser	Ser	Asp	
305					310					315					320	
Met	Leu	Gln	Asp	Thr	Val	Val	Pro	Leu	Leu	Ser	Thr	Gln	Leu	Cys	Asn	
				325					330					335		
Ser	Ser	Cys	Val	Tyr	Ser	Gly	Ala	Leu	Thr	Pro	Arg	Met	Leu	Cys	Ala	
			340					345					350			
Gly	Tyr	Leu	Asp	Gly	Arg	Ala	Asp	Ala	Cys	Gln	Gly	Asp	Ser	Gly	Gly	
		355					360					365				
Pro	Leu	Val	Cys	Pro	Asp	Gly	Asp	Thr	Trp	Arg	Leu	Val	Gly	Val	Val	
	370					375					380					
Ser	Trp	Gly	Arg	Gly	Cys	Ala	Glu	Pro	Asn	His	Pro	Gly	Val	Tyr	Ala	
385					390					395					400	
Lys	Val	Ala	Glu	Phe	Leu	Asp	Trp	Ile	His	Asp	Thr	Ala	Gln	Asp	Ser	
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Leu Leu

<210> 30

<211> 1593

<212> PRT

<213> Homo sapiens

<400> 30

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Gln Leu Leu Asn Phe Gly Ala Leu Cys Tyr Gly Arg Gln Pro Gln Pro  
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Gly Pro Val Arg Phe Pro Asp Arg Arg Gln Glu His Phe Ile Lys Gly  
35 40 45

Leu Pro Glu Tyr His Val Val Gly Pro Val Arg Val Asp Ala Ser Gly  
50 55 60

His Phe Leu Ser Tyr Gly Leu His Tyr Pro Ile Thr Ser Ser Arg Arg  
65 70 75 80

Lys Arg Asp Leu Asp Gly Ser Glu Asp Trp Val Tyr Tyr Arg Ile Ser  
85 90 95

His Glu Glu Lys Asp Leu Phe Phe Asn Leu Thr Val Asn Gln Gly Phe  
100 105 110

Leu Ser Asn Ser Tyr Ile Met Glu Lys Arg Tyr Gly Asn Leu Ser His  
115 120 125

Val Lys Met Met Ala Ser Ser Ala Pro Leu Cys His Leu Ser Gly Thr  
130 135 140

Val Leu Gln Gln Gly Thr Arg Val Gly Thr Ala Ala Leu Ser Ala Cys  
145 150 155 160

His Gly Leu Thr Gly Phe Phe Gln Leu Pro His Gly Asp Phe Phe Ile  
165 170 175

Glu Pro Val Lys Lys His Pro Leu Val Glu Gly Gly Tyr His Pro His  
180 185 190

Ile Val Tyr Arg Arg Gln Lys Val Pro Glu Thr Lys Glu Pro Thr Cys  
195 200 205

Gly Leu Lys Asp Ser Val Asn Ile Ser Gln Lys Gln Glu Leu Trp Arg  
210 215 220

Glu Lys Trp Glu Arg His Asn Leu Pro Ser Arg Ser Leu Ser Arg Arg  
225 230 235 240

Ser Ile Ser Lys Glu Arg Trp Val Glu Thr Leu Val Val Ala Asp Thr  
245 250 255

Lys Met Ile Glu Tyr His Gly Ser Glu Asn Val Glu Ser Tyr Ile Leu  
 260 265 270  
 Thr Ile Met Asn Met Val Thr Gly Leu Phe His Asn Pro Ser Ile Gly  
 275 280 285  
 Asn Ala Ile His Ile Val Val Val Arg Leu Ile Leu Leu Glu Glu Glu  
 290 295 300  
 Glu Gln Gly Leu Lys Ile Val His His Ala Glu Lys Thr Leu Ser Ser  
 305 310 315 320  
 Phe Cys Lys Trp Gln Lys Ser Ile Asn Pro Lys Ser Asp Leu Asn Pro  
 325 330 335  
 Val His His Asp Val Ala Val Leu Leu Thr Arg Lys Asp Ile Cys Ala  
 340 345 350  
 Gly Phe Asn Arg Pro Cys Glu Thr Leu Gly Leu Ser His Leu Ser Gly  
 355 360 365  
 Met Cys Gln Pro His Arg Ser Cys Asn Ile Asn Glu Asp Ser Gly Leu  
 370 375 380  
 Pro Leu Ala Phe Thr Ile Ala His Glu Leu Gly His Ser Phe Gly Ile  
 385 390 395 400  
 Gln His Asp Gly Lys Glu Asn Asp Cys Glu Pro Val Gly Arg His Pro  
 405 410 415  
 Tyr Ile Met Ser Arg Gln Leu Gln Tyr Asp Pro Thr Pro Leu Thr Trp  
 420 425 430  
 Ser Lys Cys Ser Glu Glu Tyr Ile Thr Arg Phe Leu Asp Arg Gly Trp  
 435 440 445  
 Gly Phe Cys Leu Asp Asp Ile Pro Lys Lys Lys Gly Leu Lys Ser Lys  
 450 455 460  
 Val Ile Ala Pro Gly Val Ile Tyr Asp Val His His Gln Cys Gln Leu  
 465 470 475 480  
 Gln Tyr Gly Pro Asn Ala Thr Phe Cys Gln Glu Val Glu Asn Val Cys  
 485 490 495  
 Gln Thr Leu Trp Cys Ser Val Lys Gly Phe Cys Arg Ser Lys Leu Asp  
 500 505 510  
 Ala Ala Ala Asp Gly Thr Gln Cys Gly Glu Lys Lys Trp Cys Met Ala  
 515 520 525  
 Gly Lys Cys Ile Thr Val Gly Lys Lys Pro Glu Ser Ile Pro Gly Gly  
 530 535 540  
 Trp Gly Arg Trp Ser Pro Trp Ser His Cys Ser Arg Thr Cys Gly Ala  
 545 550 555 560

Gly	Val	Gln	Ser	Ala	Glu	Arg	Leu	Cys	Asn	Asn	Pro	Glu	Pro	Lys	Phe	565	570	575	
Gly	Gly	Lys	Tyr	Cys	Thr	Gly	Glu	Arg	Lys	Arg	Tyr	Arg	Leu	Cys	Asn	580	585	590	
Val	His	Pro	Cys	Arg	Ser	Glu	Ala	Pro	Thr	Phe	Arg	Gln	Met	Gln	Cys	595	600	605	
Ser	Glu	Phe	Asp	Thr	Val	Pro	Tyr	Lys	Asn	Glu	Leu	Tyr	His	Trp	Phe	610	615	620	
Pro	Ile	Phe	Asn	Pro	Ala	His	Pro	Cys	Glu	Leu	Tyr	Cys	Arg	Pro	Ile	625	630	635	640
Asp	Gly	Gln	Phe	Ser	Glu	Lys	Met	Leu	Asp	Ala	Val	Ile	Asp	Gly	Thr	645	650	655	
Pro	Cys	Phe	Glu	Gly	Gly	Asn	Ser	Arg	Asn	Val	Cys	Ile	Asn	Gly	Ile	660	665	670	
Cys	Lys	Met	Val	Gly	Cys	Asp	Tyr	Glu	Ile	Asp	Ser	Asn	Ala	Thr	Glu	675	680	685	
Asp	Arg	Cys	Gly	Val	Cys	Leu	Gly	Asp	Gly	Ser	Ser	Cys	Gln	Thr	Val	690	695	700	
Arg	Lys	Met	Phe	Lys	Gln	Lys	Glu	Gly	Ser	Gly	Tyr	Val	Asp	Ile	Gly	705	710	715	720
Leu	Ile	Pro	Lys	Gly	Ala	Arg	Asp	Ile	Arg	Val	Met	Glu	Ile	Glu	Gly	725	730	735	
Ala	Gly	Asn	Phe	Leu	Ala	Ile	Arg	Ser	Glu	Asp	Pro	Glu	Lys	Tyr	Tyr	740	745	750	
Leu	Asn	Gly	Gly	Phe	Ile	Ile	Gln	Trp	Asn	Gly	Asn	Tyr	Lys	Leu	Ala	755	760	765	
Gly	Thr	Val	Phe	Gln	Tyr	Asp	Arg	Lys	Gly	Asp	Leu	Glu	Lys	Leu	Met	770	775	780	
Ala	Thr	Gly	Pro	Thr	Asn	Glu	Ser	Val	Trp	Ile	Gln	Leu	Leu	Phe	Gln	785	790	795	800
Val	Thr	Asn	Pro	Gly	Ile	Lys	Tyr	Glu	Tyr	Thr	Ile	Gln	Lys	Asp	Gly	805	810	815	
Leu	Asp	Asn	Asp	Val	Glu	Gln	Met	Tyr	Phe	Trp	Gln	Tyr	Gly	His	Trp	820	825	830	
Thr	Glu	Cys	Ser	Val	Thr	Cys	Gly	Thr	Gly	Ile	Arg	Arg	Gln	Thr	Ala	835	840	845	
His	Cys	Ile	Lys	Lys	Gly	Arg	Gly	Met	Val	Lys	Ala	Thr	Phe	Cys	Asp	850	855	860	

Pro Glu Thr Gln Pro Asn Gly Arg Gln Lys Lys Cys His Glu Lys Ala  
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 Cys Pro Pro Arg Trp Trp Ala Gly Glu Trp Glu Ala Cys Ser Ala Thr  
 885 890 895  
 Cys Gly Pro His Gly Glu Lys Lys Arg Thr Val Leu Cys Ile Gln Thr  
 900 905 910  
 Met Val Ser Asp Glu Gln Ala Leu Pro Pro Thr Asp Cys Gln His Leu  
 915 920 925  
 Leu Lys Pro Lys Thr Leu Leu Ser Cys Asn Arg Asp Ile Leu Cys Pro  
 930 935 940  
 Ser Asp Trp Thr Val Gly Asn Trp Ser Glu Cys Ser Val Ser Cys Gly  
 945 950 955 960  
 Gly Gly Val Arg Ile Arg Ser Val Thr Cys Ala Lys Asn His Asp Glu  
 965 970 975  
 Pro Cys Asp Val Thr Arg Lys Pro Asn Ser Arg Ala Leu Cys Gly Leu  
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 Gln Gln Cys Pro Ser Ser Arg Arg Val Leu Lys Pro Asn Lys Gly Thr  
 995 1000 1005  
 Ile Ser Asn Gly Lys Asn Pro Pro Thr Leu Lys Pro Val Pro Pro Pro  
 1010 1015 1020  
 Thr Ser Arg Pro Arg Met Leu Thr Thr Pro Thr Gly Pro Glu Ser Met  
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 Ser Thr Ser Thr Pro Ala Ile Ser Ser Pro Ser Pro Thr Thr Ala Ser  
 1045 1050 1055  
 Lys Glu Gly Asp Leu Gly Gly Lys Gln Trp Gln Asp Ser Ser Thr Gln  
 1060 1065 1070  
 Pro Glu Leu Ser Ser Arg Tyr Leu Ile Ser Thr Gly Ser Thr Ser Gln  
 1075 1080 1085  
 Pro Ile Leu Thr Ser Gln Ser Leu Ser Ile Gln Pro Ser Glu Glu Asn  
 1090 1095 1100  
 Val Ser Ser Ser Asp Thr Gly Pro Thr Ser Glu Gly Gly Leu Val Ala  
 1105 1110 1115 1120  
 Thr Thr Thr Ser Gly Ser Gly Leu Ser Ser Ser Arg Asn Pro Ile Thr  
 1125 1130 1135  
 Trp Pro Val Thr Pro Phe Tyr Asn Thr Leu Thr Lys Gly Pro Glu Met  
 1140 1145 1150  
 Glu Ile His Ser Gly Ser Gly Glu Glu Arg Glu Gln Pro Glu Asp Lys  
 1155 1160 1165

Asp Glu Ser Asn Pro Val Ile Trp Thr Lys Ile Arg Val Pro Gly Asn  
 1170 1175 1180  
 Asp Ala Pro Val Glu Ser Thr Glu Met Pro Leu Ala Pro Pro Leu Thr  
 1185 1190 1195 1200  
 Pro Asp Leu Ser Arg Glu Ser Trp Trp Pro Pro Phe Ser Thr Val Met  
 1205 1210 1215  
 Glu Gly Leu Leu Pro Ser Gln Arg Pro Thr Thr Ser Glu Thr Gly Thr  
 1220 1225 1230  
 Pro Arg Val Glu Gly Met Val Thr Glu Lys Pro Ala Asn Thr Leu Leu  
 1235 1240 1245  
 Pro Leu Gly Gly Asp His Gln Pro Glu Pro Ser Gly Lys Thr Ala Asn  
 1250 1255 1260  
 Arg Asn His Leu Lys Leu Pro Asn Asn Met Asn Gln Thr Lys Ser Ser  
 1265 1270 1275 1280  
 Glu Pro Val Leu Thr Glu Glu Asp Ala Thr Ser Leu Ile Thr Glu Gly  
 1285 1290 1295  
 Phe Leu Leu Asn Ala Ser Asn Tyr Lys Gln Leu Thr Asn Gly His Gly  
 1300 1305 1310  
 Ser Ala His Trp Ile Val Gly Asn Trp Ser Glu Cys Ser Thr Thr Cys  
 1315 1320 1325  
 Gly Leu Gly Ala Tyr Trp Lys Arg Val Glu Cys Thr Thr Gln Met Asp  
 1330 1335 1340  
 Ser Asp Cys Ala Ala Ile Gln Arg Pro Asp Pro Ala Lys Arg Cys His  
 1345 1350 1355 1360  
 Leu Arg Pro Cys Ala Gly Trp Lys Val Gly Asn Trp Ser Lys Cys Ser  
 1365 1370 1375  
 Arg Asn Cys Ser Gly Gly Phe Lys Ile Arg Glu Ile Gln Cys Val Asp  
 1380 1385 1390  
 Ser Arg Asp His Arg Asn Leu Arg Pro Phe His Cys Gln Phe Leu Ala  
 1395 1400 1405  
 Gly Ile Pro Pro Pro Leu Ser Met Ser Cys Asn Pro Glu Pro Cys Glu  
 1410 1415 1420  
 Ala Trp Gln Val Glu Pro Trp Ser Gln Cys Ser Arg Ser Cys Gly Gly  
 1425 1430 1435 1440  
 Gly Val Gln Glu Arg Gly Val Phe Cys Pro Gly Gly Leu Cys Asp Trp  
 1445 1450 1455  
 Thr Lys Arg Pro Thr Ser Thr Met Ser Cys Asn Glu His Leu Cys Cys  
 1460 1465 1470

His Trp Ala Thr Gly Asn Trp Asp Leu Cys Ser Thr Ser Cys Gly Gly  
1475 1480 1485

Gly Phe Gln Lys Arg Ile Val Gln Cys Val Pro Ser Glu Gly Asn Lys  
1490 1495 1500

Thr Glu Asp Gln Asp Gln Cys Leu Cys Asp His Lys Pro Arg Pro Pro  
1505 1510 1515 1520

Glu Phe Lys Lys Cys Asn Gln Gln Ala Cys Lys Lys Ser Ala Asp Leu  
1525 1530 1535

Leu Cys Thr Lys Asp Lys Leu Ser Ala Ser Phe Cys Gln Thr Leu Lys  
1540 1545 1550

Ala Met Lys Lys Cys Ser Val Pro Thr Val Arg Ala Glu Cys Cys Phe  
1555 1560 1565

Ser Cys Pro Gln Thr His Ile Thr His Thr Gln Arg Gln Arg Arg Gln  
1570 1575 1580

Arg Leu Leu Gln Lys Ser Lys Glu Leu  
1585 1590

<210> 31

<211> 1077

<212> PRT

<213> Homo sapiens

<400> 31

Arg Ser Gln Asp Glu Phe Leu Ser Ser Leu Glu Ser Tyr Glu Ile Ala  
1 5 10 15

Phe Pro Thr Arg Val Asp His Asn Gly Ala Leu Leu Ala Phe Ser Pro  
20 25 30

Pro Pro Pro Arg Arg Gln Arg Arg Gly Thr Gly Ala Thr Ala Glu Ser  
35 40 45

Arg Leu Phe Tyr Lys Val Ala Ser Pro Ser Thr His Phe Leu Leu Asn  
50 55 60

Leu Thr Arg Ser Ser Arg Leu Leu Ala Gly His Val Ser Val Glu Tyr  
65 70 75 80

Trp Thr Arg Glu Gly Leu Ala Trp Gln Arg Ala Ala Arg Pro His Cys  
85 90 95

Leu Tyr Ala Gly His Leu Gln Gly Gln Ala Ser Ser Ser His Val Ala  
100 105 110

Ile Ser Thr Cys Gly Gly Leu His Gly Leu Ile Val Ala Asp Glu Glu  
115 120 125

Glu Tyr Leu Ile Glu Pro Leu His Gly Gly Pro Lys Gly Ser Arg Ser



130	135	140
Pro Glu Glu Ser Gly	Pro His Val Val Tyr	Lys Arg Ser Ser Leu Arg
145	150	155 160
His Pro His Leu Asp	Thr Ala Cys Gly Val	Arg Asp Glu Lys Pro Trp
	165	170 175
Lys Gly Arg Pro Trp	Trp Leu Arg Thr Leu	Lys Pro Pro Pro Ala Arg
	180	185 190
Pro Leu Gly Asn Glu	Thr Glu Arg Gly Gln	Pro Gly Leu Lys Arg Ser
	195	200 205
Val Ser Arg Glu Arg	Tyr Val Glu Thr Leu	Val Val Ala Asp Lys Met
	210	215 220
Met Val Ala Tyr His	Gly Arg Arg Asp Val	Glu Gln Tyr Val Leu Ala
	225	230 235 240
Ile Met Asn Ile Val	Ala Lys Leu Phe Gln	Asp Ser Ser Leu Gly Ser
	245	250 255
Thr Val Asn Ile Leu	Val Thr Arg Leu Ile	Leu Leu Thr Glu Asp Gln
	260	265 270
Pro Thr Leu Glu Ile	Thr His His Ala Gly	Lys Ser Leu Asp Ser Phe
	275	280 285
Cys Lys Trp Gln Lys	Ser Ile Val Asn His	Ser Gly His Gly Asn Ala
	290	295 300
Ile Pro Glu Asn Gly	Val Ala Asn His Asp	Thr Ala Val Leu Ile Thr
	305	310 315 320
Arg Tyr Asp Ile Cys	Ile Tyr Lys Asn Lys	Pro Cys Gly Thr Leu Gly
	325	330 335
Leu Ala Pro Val Gly	Gly Met Cys Glu Arg	Glu Arg Ser Cys Ser Val
	340	345 350
Asn Glu Asp Ile Gly	Leu Pro Gln Ala Phe	Thr Ile Ala His Glu Ile
	355	360 365
Gly His Thr Phe Gly	Met Asn His Asp Gly	Val Gly Asn Ser Cys Gly
	370	375 380
Ala Arg Gly Gln Asp	Pro Ala Lys Leu Met	Ala Ala His Ile Thr Met
	385	390 395 400
Lys Thr Asn Pro Phe	Val Trp Ser Ser Cys	Asn Arg Asp Tyr Ile Thr
	405	410 415
Ser Phe Leu Asp Ser	Gly Leu Gly Leu Cys	Leu Asn Asn Arg Pro Pro
	420	425 430
Arg Gln Asp Phe Val	Tyr Pro Thr Val Ala	Pro Gly Gln Ala Tyr Asp

435	440	445
Ala Asp Glu Gln Cys Arg Phe Gln His Gly Val Lys Ser Arg Gln Cys		
450	455	460
Lys Tyr Gly Glu Val Cys Ser Glu Leu Trp Cys Leu Ser Lys Ser Asn		
465	470	475
Arg Cys Ile Thr Asn Ser Ile Pro Ala Ala Glu Gly Thr Leu Cys Gln		
485	490	495
Thr His Thr Ile Asp Lys Gly Trp Cys Tyr Lys Arg Val Cys Val Pro		
500	505	510
Phe Gly Ser Arg Pro Glu Gly Val Asp Gly Ala Trp Gly Pro Trp Thr		
515	520	525
Pro Trp Gly Asp Cys Ser Arg Thr Cys Gly Gly Gly Val Ser Ser Ser		
530	535	540
Ser Arg His Cys Asp Ser Pro Arg Pro Thr Ile Gly Gly Lys Tyr Cys		
545	550	555
Leu Gly Glu Arg Arg Arg His Arg Ser Cys Asn Thr Asp Asp Cys Pro		
565	570	575
Pro Gly Ser Gln Asp Phe Arg Glu Val Gln Cys Ser Glu Phe Asp Ser		
580	585	590
Ile Pro Phe Arg Gly Lys Phe Tyr Lys Trp Lys Thr Tyr Arg Gly Gly		
595	600	605
Gly Val Lys Ala Cys Ser Leu Thr Ser Leu Ala Glu Gly Phe Asn Phe		
610	615	620
Tyr Thr Glu Arg Ala Ala Ala Val Val Asp Gly Thr Pro Cys Arg Pro		
625	630	635
Asp Thr Val Asp Ile Cys Val Ser Gly Glu Cys Lys His Val Gly Cys		
645	650	655
Asp Arg Val Leu Gly Ser Asp Leu Arg Glu Asp Lys Cys Arg Val Cys		
660	665	670
Gly Gly Asp Gly Ser Ala Cys Glu Thr Ile Glu Gly Val Phe Ser Pro		
675	680	685
Ala Ser Pro Gly Ala Gly Tyr Glu Asp Val Val Trp Ile Pro Lys Gly		
690	695	700
Ser Val His Ile Phe Ile Gln Asp Leu Asn Leu Ser Leu Ser His Leu		
705	710	715
Ala Leu Lys Gly Asp Gln Glu Ser Leu Leu Leu Glu Gly Leu Pro Gly		
725	730	735
Thr Pro Gln Pro His Arg Leu Pro Leu Ala Gly Thr Thr Phe Gln Leu		

740					745					750					
Arg	Gln	Gly	Pro	Asp	Gln	Val	Gln	Ser	Leu	Glu	Ala	Leu	Gly	Pro	Ile
		755					760					765			
Asn	Ala	Ser	Leu	Ile	Val	Met	Val	Leu	Ala	Arg	Thr	Glu	Leu	Pro	Ala
	770					775					780				
Leu	Arg	Tyr	Arg	Phe	Asn	Ala	Pro	Ile	Ala	Arg	Asp	Ser	Leu	Pro	Pro
785					790					795					800
Tyr	Ser	Trp	His	Tyr	Ala	Pro	Trp	Thr	Lys	Cys	Ser	Ala	Gln	Cys	Ala
			805						810					815	
Gly	Gly	Ser	Gln	Val	Gln	Ala	Val	Glu	Cys	Arg	Asn	Gln	Leu	Asp	Ser
			820					825					830		
Ser	Ala	Val	Ala	Pro	His	Tyr	Cys	Ser	Ala	His	Ser	Lys	Leu	Pro	Lys
		835					840					845			
Arg	Gln	Arg	Ala	Cys	Asn	Thr	Glu	Pro	Cys	Pro	Pro	Asp	Trp	Val	Val
	850					855						860			
Gly	Asn	Trp	Ser	Leu	Cys	Ser	Arg	Ser	Cys	Asp	Ala	Gly	Val	Arg	Ser
865					870					875					880
Arg	Ser	Val	Val	Cys	Gln	Arg	Arg	Val	Ser	Ala	Ala	Glu	Glu	Lys	Ala
				885					890					895	
Leu	Asp	Asp	Ser	Ala	Cys	Pro	Gln	Pro	Arg	Pro	Pro	Val	Leu	Glu	Ala
			900					905					910		
Cys	His	Gly	Pro	Thr	Cys	Pro	Pro	Glu	Trp	Ala	Ala	Leu	Asp	Trp	Ser
	915							920					925		
Glu	Cys	Thr	Pro	Ser	Cys	Gly	Pro	Gly	Leu	Arg	His	Arg	Val	Val	Leu
	930					935					940				
Cys	Lys	Ser	Ala	Asp	His	Arg	Ala	Thr	Leu	Pro	Pro	Ala	His	Cys	Ser
945					950					955					960
Pro	Ala	Ala	Lys	Pro	Pro	Ala	Thr	Met	Arg	Cys	Asn	Leu	Arg	Arg	Cys
				965					970					975	
Pro	Pro	Ala	Arg	Trp	Val	Ala	Gly	Glu	Trp	Gly	Glu	Cys	Ser	Ala	Gln
			980					985					990		
Cys	Gly	Val	Gly	Gln	Arg	Gln	Arg	Ser	Val	Arg	Cys	Thr	Ser	His	Thr
	995						1000					1005			
Gly	Gln	Ala	Ser	His	Glu	Cys	Thr	Glu	Ala	Leu	Arg	Pro	Pro	Thr	Thr
	1010						1015				1020				
Gln	Gln	Cys	Glu	Ala	Lys	Cys	Asp	Ser	Pro	Thr	Pro	Gly	Asp	Gly	Pro
1025					1030					1035					1040
Glu	Glu	Cys	Lys	Asp	Val	Asn	Lys	Val	Ala	Tyr	Cys	Pro	Leu	Val	Leu

1045					1050					1055					
Lys	Phe	Gln	Phe	Cys	Ser	Arg	Ala	Tyr	Phe	Arg	Gln	Met	Cys	Cys	Lys
1060					1065					1070					
Thr Cys Gln Gly His 1075															
<210> 32 <211> 997 <212> PRT <213> Homo sapiens															
<400> 32 Met Pro Gly Gly Pro Ser Pro Arg Ser Pro Ala Pro Leu Leu Arg Pro 1 5 10 15															
Leu Leu Leu Leu Leu Cys Ala Leu Ala Pro Gly Ala Pro Gly Pro Ala 20 25 30															
Pro Gly Arg Ala Thr Glu Gly Arg Ala Ala Leu Asp Ile Val His Pro 35 40 45															
Val Arg Val Asp Ala Gly Gly Ser Phe Leu Ser Tyr Glu Leu Trp Pro 50 55 60															
Arg Ala Leu Arg Lys Arg Asp Val Ser Val Arg Arg Asp Ala Pro Ala 65 70 75 80															
Phe Tyr Glu Leu Gln Tyr Arg Gly Arg Glu Leu Arg Phe Asn Leu Thr 85 90 95															
Ala Asn Gln His Leu Leu Ala Pro Gly Phe Val Ser Glu Thr Arg Arg 100 105 110															
Arg Gly Gly Leu Gly Arg Ala His Ile Arg Ala His Thr Pro Ala Cys 115 120 125															
His Leu Leu Gly Glu Val Gln Asp Pro Glu Leu Glu Gly Gly Leu Ala 130 135 140															
Ala Ile Ser Ala Cys Asp Gly Leu Lys Gly Val Phe Gln Leu Ser Asn 145 150 155 160															
Glu Asp Tyr Phe Ile Glu Pro Leu Asp Ser Ala Pro Ala Arg Pro Gly 165 170 175															
His Ala Gln Pro His Val Val Tyr Lys Arg Gln Ala Pro Glu Arg Leu 180 185 190															
Ala Gln Arg Gly Asp Ser Ser Ala Pro Ser Thr Cys Gly Val Gln Val 195 200 205															
Tyr Pro Glu Leu Glu Ser Arg Arg Glu Arg Trp Glu Gln Arg Gln Gln 210 215 220															

Trp	Arg	Arg	Pro	Arg	Leu	Arg	Arg	Leu	His	Gln	Arg	Ser	Val	Ser	Lys	225	230	235	240
Glu	Lys	Trp	Val	Glu	Thr	Leu	Val	Val	Ala	Asp	Ala	Lys	Met	Val	Glu	245	250	255	
Tyr	His	Gly	Gln	Pro	Gln	Val	Glu	Ser	Tyr	Val	Leu	Thr	Ile	Met	Asn	260	265	270	
Met	Val	Ala	Gly	Leu	Phe	His	Asp	Pro	Ser	Ile	Gly	Asn	Pro	Ile	His	275	280	285	
Ile	Thr	Ile	Val	Arg	Leu	Val	Leu	Leu	Glu	Asp	Glu	Glu	Glu	Asp	Leu	290	295	300	
Lys	Ile	Thr	His	His	Ala	Asp	Asn	Thr	Leu	Lys	Ser	Phe	Cys	Lys	Trp	305	310	315	320
Gln	Lys	Ser	Ile	Asn	Met	Lys	Gly	Asp	Ala	His	Pro	Leu	His	His	Asp	325	330	335	
Thr	Ala	Ile	Leu	Leu	Thr	Arg	Lys	Asp	Leu	Cys	Ala	Ala	Met	Asn	Arg	340	345	350	
Pro	Cys	Glu	Thr	Leu	Gly	Leu	Ser	His	Val	Ala	Gly	Met	Cys	Gln	Pro	355	360	365	
His	Arg	Ser	Cys	Ser	Ile	Asn	Glu	Asp	Thr	Gly	Leu	Pro	Leu	Ala	Phe	370	375	380	
Thr	Val	Ala	His	Glu	Leu	Gly	His	Ser	Phe	Gly	Ile	Gln	His	Asp	Gly	385	390	395	400
Ser	Gly	Asn	Asp	Cys	Glu	Pro	Val	Gly	Lys	Arg	Pro	Phe	Ile	Met	Ser	405	410	415	
Pro	Gln	Leu	Leu	Tyr	Asp	Ala	Ala	Pro	Leu	Thr	Trp	Ser	Arg	Cys	Ser	420	425	430	
Arg	Gln	Tyr	Ile	Thr	Arg	Phe	Leu	Asp	Arg	Gly	Trp	Gly	Leu	Cys	Leu	435	440	445	
Asp	Asp	Pro	Pro	Ala	Lys	Asp	Ile	Ile	Asp	Phe	Pro	Ser	Val	Pro	Pro	450	455	460	
Gly	Val	Leu	Tyr	Asp	Val	Ser	His	Gln	Cys	Arg	Leu	Gln	Tyr	Gly	Ala	465	470	475	480
Tyr	Ser	Ala	Phe	Cys	Glu	Asp	Met	Asp	Asn	Val	Cys	His	Thr	Leu	Trp	485	490	495	
Cys	Ser	Val	Gly	Thr	Thr	Cys	His	Ser	Lys	Leu	Asp	Ala	Ala	Val	Asp	500	505	510	
Gly	Thr	Arg	Cys	Gly	Glu	Asn	Lys	Trp	Cys	Leu	Ser	Gly	Glu	Cys	Val	515	520	525	

Pro Val Gly Phe Arg Pro Glu Ala Val Asp Gly Gly Trp Ser Gly Trp  
 530 535 540  
 Ser Ala Trp Ser Ile Cys Ser Arg Ser Cys Gly Met Gly Val Gln Ser  
 545 550 555 560  
 Ala Glu Arg Gln Cys Thr Gln Pro Thr Pro Lys Tyr Lys Gly Arg Tyr  
 565 570 575  
 Cys Val Gly Glu Arg Lys Arg Phe Arg Leu Cys Asn Leu Gln Ala Cys  
 580 585 590  
 Pro Ala Gly Arg Pro Ser Phe Arg His Val Gln Cys Ser His Phe Asp  
 595 600 605  
 Ala Met Leu Tyr Lys Gly Gln Leu His Thr Trp Val Pro Val Val Asn  
 610 615 620  
 Asp Val Asn Pro Cys Glu Leu His Cys Arg Pro Ala Asn Glu Tyr Phe  
 625 630 635 640  
 Ala Lys Lys Leu Arg Asp Ala Val Val Asp Gly Thr Pro Cys Tyr Gln  
 645 650 655  
 Val Arg Ala Ser Arg Asp Leu Cys Ile Asn Gly Ile Cys Lys Asn Val  
 660 665 670  
 Gly Cys Asp Phe Glu Ile Asp Ser Gly Ala Met Glu Asp Arg Cys Gly  
 675 680 685  
 Val Cys His Gly Asn Gly Ser Thr Cys His Thr Val Ser Gly Thr Phe  
 690 695 700  
 Glu Glu Ala Glu Gly Leu Gly Tyr Val Asp Val Gly Leu Ile Pro Ala  
 705 710 715 720  
 Gly Ala Arg Glu Ile Arg Ile Gln Glu Val Ala Glu Ala Ala Asn Phe  
 725 730 735  
 Leu Ala Leu Arg Ser Glu Asp Pro Glu Lys Tyr Phe Leu Asn Gly Gly  
 740 745 750  
 Trp Thr Ile Gln Trp Asn Gly Asp Tyr Gln Val Ala Gly Thr Thr Phe  
 755 760 765  
 Thr Tyr Ala Arg Arg Gly Asn Trp Glu Asn Leu Thr Ser Pro Gly Pro  
 770 775 780  
 Thr Lys Glu Pro Val Trp Ile Gln Val Pro Ala Ser Arg Gly Pro Gly  
 785 790 795 800  
 Gly Gly Ser Arg Gly Gly Val Pro Arg Pro Ser Thr Leu His Gly Arg  
 805 810 815  
 Ser Arg Pro Gly Gly Val Ser Pro Gly Ser Val Thr Glu Pro Gly Ser  
 820 825 830

Glu Pro Gly Pro Pro Ala Ala Ala Ser Thr Ser Val Ser Pro Ser Leu  
           835                          840                          845  
 Lys Trp Pro Asn Leu Val Ala Ala Val His Arg Gly Gly Trp Gly Gln  
           850                          855                          860  
 Ala Pro Leu Gly Leu Gly Gly Trp Arg Arg His Leu Val Leu Met Gly  
  865                          870                          875                          880  
 Pro Arg Leu Pro Thr Gln Leu Leu Phe Gln Glu Ser Asn Pro Gly Val  
                           885                          890                          895  
 His Tyr Glu Tyr Thr Ile His Arg Glu Ala Gly Gly His Asp Glu Val  
                           900                          905                          910  
 Pro Pro Pro Val Phe Ser Trp His Tyr Gly Pro Trp Thr Lys Cys Thr  
                           915                          920                          925  
 Val Thr Cys Gly Arg Gly Glu Lys Trp Gly Arg His Ser Pro Thr Cys  
           930                          935                          940  
 Arg Gly Leu Val Ser Gly Gln Gly His Trp Leu Gln Leu Pro Ala His  
  945                          950                          955                          960  
 Cys Trp Ala Thr Thr Gly Leu Glu Val Cys Phe Ser Glu Pro Gln Phe  
                           965                          970                          975  
 Ser Ile Cys Glu Met Arg Leu Ala Ile Ala Leu Cys Pro Arg Pro Ala  
                           980                          985                          990  
 Gly Arg Val His Gly  
           995

<210> 33  
 <211> 854  
 <212> PRT  
 <213> Homo sapiens

<400> 33  
 Met Met Val Ala Tyr His Gly Arg Arg Asp Val Glu Gln Tyr Val Leu  
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 Ala Ile Met Asn Ile Val Ala Lys Leu Phe Gln Asp Ser Ser Leu Gly  
           20                          25                          30  
 Ser Thr Val Asn Ile Leu Val Thr Arg Leu Ile Leu Leu Thr Glu Asp  
           35                          40                          45  
 Gln Pro Thr Leu Glu Ile Thr His His Ala Gly Lys Ser Leu Asp Ser  
   50                          55                          60  
 Phe Cys Lys Trp Gln Lys Ser Ile Val Asn His Ser Gly His Gly Asn  
   65                          70                          75                          80  
 Ala Ile Pro Glu Asn Gly Val Ala Asn His Asp Thr Ala Val Leu Ile  
           85                          90                          95

Thr	Arg	Tyr	Asp	Ile	Cys	Ile	Tyr	Lys	Asn	Lys	Pro	Cys	Gly	Thr	Leu	100	105	110
Gly	Leu	Ala	Pro	Val	Gly	Gly	Met	Cys	Glu	Arg	Glu	Arg	Ser	Cys	Ser	115	120	125
Val	Asn	Glu	Asp	Ile	Gly	Leu	Ala	Thr	Ala	Phe	Thr	Ile	Ala	His	Glu	130	135	140
Ile	Gly	His	Thr	Phe	Gly	Met	Asn	His	Asp	Gly	Val	Gly	Asn	Ser	Cys	145	150	155
Gly	Ala	Arg	Gly	Gln	Asp	Pro	Ala	Lys	Leu	Met	Ala	Ala	His	Ile	Thr	165	170	175
Met	Lys	Thr	Asn	Pro	Phe	Val	Trp	Ser	Ser	Cys	Ser	Arg	Asp	Tyr	Ile	180	185	190
Thr	Ser	Phe	Leu	Asp	Ser	Gly	Leu	Gly	Leu	Cys	Leu	Asn	Asn	Arg	Pro	195	200	205
Pro	Arg	Gln	Asp	Phe	Val	Tyr	Pro	Thr	Val	Ala	Pro	Gly	Gln	Ala	Tyr	210	215	220
Asp	Ala	Asp	Glu	Gln	Cys	Arg	Phe	Gln	His	Gly	Val	Lys	Ser	Arg	Gln	225	230	235
Cys	Lys	Tyr	Gly	Glu	Val	Cys	Ser	Glu	Leu	Trp	Cys	Leu	Ser	Lys	Ser	245	250	255
Asn	Arg	Cys	Ile	Thr	Asn	Ser	Ile	Pro	Ala	Ala	Glu	Gly	Thr	Leu	Cys	260	265	270
Gln	Thr	His	Thr	Ile	Asp	Lys	Gly	Trp	Cys	Tyr	Lys	Arg	Val	Cys	Val	275	280	285
Pro	Phe	Gly	Ser	Arg	Pro	Glu	Gly	Val	Asp	Gly	Ala	Trp	Gly	Pro	Trp	290	295	300
Thr	Pro	Trp	Gly	Asp	Cys	Ser	Arg	Thr	Cys	Gly	Gly	Gly	Val	Ser	Ser	305	310	315
Ser	Ser	Arg	His	Cys	Asp	Ser	Pro	Arg	Pro	Thr	Ile	Gly	Gly	Lys	Tyr	325	330	335
Cys	Leu	Gly	Glu	Arg	Arg	Arg	His	Arg	Ser	Cys	Asn	Thr	Asp	Asp	Cys	340	345	350
Pro	Pro	Gly	Ser	Gln	Asp	Phe	Arg	Glu	Val	Gln	Cys	Ser	Glu	Phe	Asp	355	360	365
Ser	Ile	Pro	Phe	Arg	Gly	Lys	Phe	Tyr	Lys	Trp	Lys	Thr	Tyr	Arg	Gly	370	375	380
Gly	Gly	Val	Lys	Ala	Cys	Ser	Leu	Thr	Cys	Leu	Ala	Glu	Gly	Phe	Asn	385	390	395



Phe Tyr Thr Glu Arg Ala Ala Ala Val Val Asp Gly Thr Pro Cys Arg  
405 410 415  
Pro Asp Thr Val Asp Ile Cys Val Ser Gly Glu Cys Lys His Val Gly  
420 425 430  
Cys Asp Arg Val Leu Gly Ser Asp Leu Arg Glu Asp Lys Cys Arg Val  
435 440 445  
Cys Gly Gly Asp Gly Ser Ala Cys Glu Thr Ile Glu Gly Val Phe Ser  
450 455 460  
Pro Ala Ser Pro Gly Ala Gly Tyr Glu Asp Val Val Trp Ile Pro Lys  
465 470 475 480  
Gly Ser Val His Ile Phe Ile Gln Asp Leu Asn Leu Ser Leu Ser His  
485 490 495  
Leu Ala Leu Lys Gly Asp Gln Glu Ser Leu Leu Leu Glu Gly Leu Pro  
500 505 510  
Gly Thr Pro Gln Pro His Arg Leu Pro Leu Ala Gly Thr Thr Phe Gln  
515 520 525  
Leu Arg Gln Gly Pro Asp Gln Val Gln Ser Leu Glu Ala Leu Gly Pro  
530 535 540  
Ile Asn Ala Ser Leu Ile Val Met Val Leu Ala Arg Thr Glu Leu Pro  
545 550 555 560  
Ala Leu Arg Tyr Arg Phe Asn Ala Pro Ile Ala Arg Asp Ser Leu Pro  
565 570 575  
Pro Tyr Ser Trp His Tyr Ala Pro Trp Thr Lys Cys Ser Ala Gln Cys  
580 585 590  
Ala Gly Gly Ser Gln Val Gln Ala Val Glu Cys Arg Asn Gln Leu Asp  
595 600 605  
Ser Ser Ala Val Ala Pro His Tyr Cys Ser Ala His Ser Lys Leu Pro  
610 615 620  
Lys Arg Gln Arg Ala Cys Asn Thr Glu Pro Cys Pro Pro Asp Trp Val  
625 630 635 640  
Val Gly Asn Trp Ser Leu Cys Ser Arg Ser Cys Asp Ala Gly Val Arg  
645 650 655  
Ser Arg Ser Val Val Cys Gln Arg Arg Val Ser Ala Ala Glu Glu Lys  
660 665 670  
Ala Leu Asp Asp Ser Ala Cys Pro Gln Pro Arg Pro Pro Val Leu Glu  
675 680 685  
Ala Cys His Gly Pro Thr Cys Pro Pro Glu Trp Ala Ala Leu Asp Trp  
690 695 700

Ser Glu Cys Thr Pro Ser Cys Gly Pro Gly Leu Arg His Arg Val Val  
 705 710 715 720  
 Leu Cys Lys Ser Ala Asp His Arg Ala Thr Leu Pro Pro Ala His Cys  
 725 730 735  
 Ser Pro Ala Ala Lys Pro Pro Ala Thr Met Arg Cys Asn Leu Arg Arg  
 740 745 750  
 Cys Pro Pro Ala Arg Trp Val Ala Gly Glu Trp Gly Glu Cys Ser Ala  
 755 760 765  
 Gln Cys Gly Val Gly Gln Arg Gln Arg Ser Val Arg Cys Thr Ser His  
 770 775 780  
 Thr Gly Gln Ala Ser His Glu Cys Thr Glu Ala Leu Arg Pro Pro Thr  
 785 790 795 800  
 Thr Gln Gln Cys Glu Ala Lys Cys Asp Ser Pro Thr Pro Gly Asp Gly  
 805 810 815  
 Pro Glu Glu Cys Lys Asp Val Asn Lys Val Ala Tyr Cys Pro Leu Val  
 820 825 830  
 Leu Lys Phe Gln Phe Cys Ser Arg Ala Tyr Phe Arg Gln Met Cys Cys  
 835 840 845  
 Lys Thr Cys His Gly His  
 850

<210> 34  
 <211> 860  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> VARIANT  
 <222> (450)  
 <223> Wherein Xaa is any amino acid.

<400> 34  
 Met Glu Ile Leu Trp Lys Thr Leu Thr Trp Ile Leu Ser Leu Ile Met  
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 Ala Ser Ser Glu Phe His Ser Asp His Arg Leu Ser Tyr Ser Ser Gln  
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 Glu Glu Phe Leu Thr Tyr Leu Glu His Tyr Gln Leu Thr Ile Pro Ile  
 35 40 45  
 Arg Val Asp Gln Asn Gly Ala Phe Leu Ser Phe Thr Val Lys Asn Asp  
 50 55 60  
 Lys His Ser Arg Arg Arg Arg Ser Met Asp Pro Ile Asp Pro Gln Gln  
 65 70 75 80

Ala	Val	Ser	Lys	Leu	Phe	Phe	Lys	Leu	Ser	Ala	Tyr	Gly	Lys	His	Phe		
				85					90					95			
His	Leu	Asn	Leu	Thr	Leu	Asn	Thr	Asp	Phe	Val	Ser	Lys	His	Phe	Thr		
			100					105					110				
Val	Glu	Tyr	Trp	Gly	Lys	Asp	Gly	Pro	Gln	Trp	Lys	His	Asp	Phe	Leu		
		115					120					125					
Asp	Asn	Cys	His	Tyr	Thr	Gly	Tyr	Leu	Gln	Asp	Gln	Arg	Ser	Thr	Thr		
		130				135					140						
Lys	Val	Ala	Leu	Ser	Asn	Cys	Val	Gly	Leu	His	Gly	Val	Ile	Ala	Thr		
145					150					155					160		
Glu	Asp	Glu	Glu	Tyr	Phe	Ile	Glu	Pro	Leu	Lys	Asn	Thr	Thr	Glu	Asp		
			165					170						175			
Ser	Lys	His	Phe	Ser	Tyr	Glu	Asn	Gly	His	Pro	His	Val	Ile	Tyr	Lys		
			180					185					190				
Lys	Ser	Ala	Leu	Gln	Gln	Arg	His	Leu	Tyr	Asp	His	Ser	His	Cys	Gly		
		195				200						205					
Val	Ser	Asp	Phe	Thr	Arg	Ser	Gly	Lys	Pro	Trp	Trp	Leu	Asn	Asp	Thr		
		210				215						220					
Ser	Thr	Val	Ser	Tyr	Ser	Leu	Pro	Ile	Asn	Asn	Thr	His	Ile	His	His		
225					230				235					240			
Arg	Gln	Lys	Arg	Ser	Val	Ser	Ile	Glu	Arg	Phe	Val	Glu	Thr	Leu	Val		
			245					250						255			
Val	Ala	Asp	Lys	Met	Met	Val	Gly	Tyr	His	Gly	Arg	Lys	Asp	Ile	Glu		
		260					265						270				
His	Tyr	Ile	Leu	Ser	Val	Met	Asn	Ile	Val	Ala	Lys	Leu	Tyr	Arg	Asp		
		275					280					285					
Ser	Ser	Leu	Gly	Asn	Val	Val	Asn	Ile	Ile	Val	Ala	Arg	Leu	Ile	Val		
		290				295					300						
Leu	Thr	Glu	Asp	Gln	Pro	Asn	Leu	Glu	Ile	Asn	His	His	Ala	Asp	Lys		
305					310					315					320		
Ser	Leu	Asp	Ser	Phe	Cys	Lys	Trp	Gln	Lys	Ser	Ile	Leu	Ser	His	Gln		
			325						330					335			
Ser	Asp	Gly	Asn	Thr	Ile	Pro	Glu	Asn	Gly	Ile	Ala	His	His	Asp	Asn		
			340					345					350				
Ala	Val	Leu	Ile	Thr	Arg	Tyr	Asp	Ile	Cys	Thr	Tyr	Lys	Asn	Lys	Pro		
		355					360					365					
Cys	Gly	Thr	Leu	Gly	Leu	Ala	Ser	Val	Ala	Gly	Met	Cys	Glu	Pro	Glu		
		370				375					380						

Arg Ser Cys Ser Ile Asn Glu Asp Ile Gly Leu Gly Ser Ala Phe Thr  
 385 390 395 400  
 Ile Ala His Glu Ile Val His Asn Phe Gly Met Asn His Asp Gly Ile  
 405 410 415  
 Gly Asn Ser Cys Gly Arg Lys Val Met Lys Gln Gln Asn Tyr Gly Ser  
 420 425 430  
 Ser His Tyr Cys Glu Tyr Gln Ser Phe Phe Leu Val Cys Leu Gln Ser  
 435 440 445  
 Arg Xaa His His Gln Leu Phe Arg Glu Val Cys Arg Glu Leu Trp Cys  
 450 455 460  
 Leu Ser Lys Ser Asn Arg Cys Val Thr Asn Ser Ile Pro Ala Ala Glu  
 465 470 475 480  
 Gly Thr Leu Cys Gln Thr Gly Asn Ile Glu Lys Gly Trp Cys Tyr Gln  
 485 490 495  
 Gly Asp Cys Val Pro Phe Gly Thr Trp Pro Gln Ser Ile Asp Gly Gly  
 500 505 510  
 Trp Gly Pro Trp Ser Leu Trp Gly Glu Cys Ser Arg Thr Cys Gly Gly  
 515 520 525  
 Gly Val Ser Ser Ser Leu Arg His Cys Asp Ser Pro Ala Pro Ser Gly  
 530 535 540  
 Gly Gly Lys Tyr Cys Leu Gly Glu Arg Lys Arg Tyr Arg Ser Cys Asn  
 545 550 555 560  
 Thr Asp Pro Cys Pro Leu Gly Ser Arg Asp Phe Arg Glu Lys Gln Cys  
 565 570 575  
 Ala Asp Phe Asp Asn Met Pro Phe Arg Gly Lys Tyr Tyr Asn Trp Lys  
 580 585 590  
 Pro Tyr Thr Gly Gly Gly Val Lys Pro Cys Ala Leu Asn Cys Leu Ala  
 595 600 605  
 Glu Gly Tyr Asn Phe Tyr Thr Glu Arg Ala Pro Ala Val Ile Asp Gly  
 610 615 620  
 Thr Gln Cys Asn Ala Asp Ser Leu Asp Ile Cys Ile Asn Gly Glu Cys  
 625 630 635 640  
 Lys His Val Gly Cys Asp Asn Ile Leu Gly Ser Asp Ala Arg Glu Asp  
 645 650 655  
 Arg Cys Arg Val Cys Gly Gly Gly Gly Ser Thr Cys Asp Ala Ile Glu  
 660 665 670  
 Gly Phe Phe Asn Asp Ser Leu Pro Arg Gly Gly Tyr Met Glu Val Val  
 675 680 685

Gln Ile Pro Arg Gly Ser Val His Ile Glu Val Arg Glu Val Ala Met  
 690 695 700  
 Ser Lys Asn Tyr Ile Ala Leu Lys Ser Glu Gly Asp Asp Tyr Tyr Ile  
 705 710 715 720  
 Asn Gly Ala Trp Thr Ile Asp Trp Pro Arg Lys Phe Asp Val Ala Gly  
 725 730 735  
 Thr Ala Phe His Tyr Lys Arg Pro Thr Asp Glu Pro Glu Ser Leu Glu  
 740 745 750  
 Ala Leu Gly Pro Thr Ser Glu Asn Leu Ile Val Met Val Leu Leu Gln  
 755 760 765  
 Glu Gln Asn Leu Gly Ile Arg Tyr Lys Phe Asn Val Pro Ile Thr Arg  
 770 775 780  
 Thr Gly Ser Gly Asp Asn Glu Val Gly Phe Thr Trp Asn His Gln Pro  
 785 790 795 800  
 Trp Ser Glu Cys Ser Ala Thr Cys Ala Gly Gly Lys Met Pro Thr Arg  
 805 810 815  
 Gln Pro Thr Gln Arg Ala Arg Trp Arg Thr Lys His Ile Leu Ser Tyr  
 820 825 830  
 Ala Leu Cys Leu Leu Lys Lys Leu Ile Gly Asn Ile Ser Cys Arg Phe  
 835 840 845  
 Ala Ser Ser Cys Asn Leu Ala Lys Glu Thr Leu Leu  
 850 855 860

<210> 35  
 <211> 936  
 <212> PRT  
 <213> Homo sapiens

<400> 35  
 Arg Leu Leu Ile Tyr Ala Val Leu Pro Thr Gly Asp Val Ile Gly Asp  
 1 5 10 15  
 Ser Ala Lys Tyr Asp Val Glu Asn Cys Leu Ala Asn Lys Val Asp Leu  
 20 25 30  
 Ser Phe Ser Pro Ser Gln Ser Leu Pro Ala Ser His Ala His Leu Arg  
 35 40 45  
 Val Thr Ala Ala Pro Gln Ser Val Cys Ala Leu Arg Ala Val Asp Gln  
 50 55 60  
 Ser Val Leu Leu Met Lys Pro Asp Ala Glu Leu Ser Ala Ser Ser Val  
 65 70 75 80  
 Tyr Asn Leu Leu Pro Glu Lys Asp Leu Thr Gly Phe Pro Gly Pro Leu

85										90					95				
Asn	Asp	Gln	Asp	Asn	Glu	Asp	Cys	Ile	Asn	Arg	His	Asn	Val	Tyr	Ile				
			100					105					110						
Asn	Gly	Ile	Thr	Tyr	Thr	Pro	Val	Ser	Ser	Thr	Asn	Glu	Lys	Asp	Met				
		115					120					125							
Tyr	Ser	Phe	Leu	Glu	Asp	Met	Gly	Leu	Lys	Ala	Phe	Thr	Asn	Ser	Lys				
	130					135					140								
Ile	Arg	Lys	Pro	Lys	Met	Cys	Pro	Gln	Leu	Gln	Gln	Tyr	Glu	Met	His				
145					150					155					160				
Gly	Pro	Glu	Gly	Leu	Arg	Val	Gly	Phe	Tyr	Glu	Ser	Asp	Val	Met	Gly				
				165					170					175					
Arg	Gly	His	Ala	Arg	Leu	Val	His	Val	Glu	Glu	Pro	His	Thr	Glu	Thr				
			180					185					190						
Val	Arg	Lys	Tyr	Phe	Pro	Glu	Thr	Trp	Ile	Trp	Asp	Leu	Val	Val	Val				
		195					200					205							
Asn	Ser	Ala	Gly	Val	Ala	Glu	Val	Gly	Val	Thr	Val	Pro	Asp	Thr	Ile				
	210					215					220								
Thr	Glu	Trp	Lys	Ala	Gly	Ala	Phe	Cys	Leu	Ser	Glu	Asp	Ala	Gly	Leu				
225					230					235					240				
Gly	Ile	Ser	Ser	Thr	Ala	Ser	Leu	Arg	Ala	Phe	Gln	Pro	Phe	Phe	Val				
				245					250					255					
Glu	Leu	Thr	Met	Pro	Tyr	Ser	Val	Ile	Arg	Gly	Glu	Ala	Phe	Thr	Leu				
			260					265					270						
Lys	Ala	Thr	Val	Leu	Asn	Tyr	Leu	Pro	Lys	Cys	Ile	Arg	Val	Ser	Val				
		275					280					285							
Gln	Leu	Glu	Ala	Ser	Pro	Ala	Phe	Leu	Ala	Val	Pro	Val	Glu	Lys	Glu				
	290					295					300								
Gln	Ala	Pro	His	Cys	Ile	Cys	Ala	Asn	Gly	Arg	Gln	Thr	Val	Ser	Trp				
305					310					315					320				
Ala	Val	Thr	Pro	Lys	Ser	Leu	Gly	Asn	Val	Asn	Phe	Thr	Val	Ser	Ala				
				325					330					335					
Glu	Ala	Leu	Glu	Ser	Gln	Glu	Leu	Cys	Gly	Thr	Glu	Val	Pro	Ser	Val				
			340					345					350						
Pro	Glu	His	Gly	Arg	Lys	Asp	Thr	Val	Ile	Lys	Pro	Leu	Leu	Val	Glu				
		355					360					365							
Pro	Glu	Gly	Leu	Glu	Lys	Glu	Thr	Thr	Phe	Asn	Ser	Leu	Leu	Cys	Pro				
	370					375					380								
Ser	Gly	Gly	Glu	Val	Ser	Glu	Glu	Leu	Ser	Leu	Lys	Leu	Pro	Pro	Asn				

385		390		395		400
Val Val Glu Glu Ser Ala Arg Ala Ser Val Ser Val Leu Gly Asp Ile						
		405		410		415
Leu Gly Ser Ala Met Gln Asn Thr Gln Asn Leu Leu Gln Met Pro Tyr						
		420		425		430
Gly Cys Gly Glu Gln Asn Met Val Leu Phe Ala Pro Asn Ile Tyr Val						
		435		440		445
Leu Asp Tyr Leu Asn Glu Thr Gln Gln Leu Thr Pro Glu Ile Lys Ser						
		450		455		460
Lys Ala Ile Gly Tyr Leu Asn Thr Gly Tyr Gln Arg Gln Leu Asn Tyr						
		465		470		475
Lys His Tyr Asp Gly Ser Tyr Ser Thr Phe Gly Glu Arg Tyr Gly Arg						
		485		490		495
Asn Gln Gly Asn Thr Trp Leu Thr Ala Phe Val Leu Lys Thr Phe Ala						
		500		505		510
Gln Ala Arg Ala Tyr Ile Phe Ile Asp Glu Ala His Ile Thr Gln Ala						
		515		520		525
Leu Ile Trp Leu Ser Gln Arg Gln Lys Asp Asn Gly Cys Phe Arg Ser						
		530		535		540
Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys Gly Gly Val Glu Asp Glu						
		545		550		555
Val Thr Leu Ser Ala Tyr Ile Thr Ile Ala Leu Leu Glu Ile Pro Leu						
		565		570		575
Thr Val Thr His Pro Val Val Arg Asn Ala Leu Phe Cys Leu Glu Ser						
		580		585		590
Ala Trp Lys Thr Ala Gln Glu Gly Asp His Gly Ser His Val Tyr Thr						
		595		600		605
Lys Ala Leu Leu Ala Tyr Ala Phe Ala Leu Ala Gly Asn Gln Asp Lys						
		610		615		620
Arg Lys Glu Val Leu Lys Ser Leu Asn Glu Glu Ala Val Lys Lys Asp						
		625		630		635
Asn Ser Val His Trp Glu Arg Pro Gln Lys Pro Lys Ala Pro Val Gly						
		645		650		655
His Phe Tyr Glu Pro Gln Ala Pro Ser Ala Glu Val Glu Met Thr Ser						
		660		665		670
Tyr Val Leu Leu Ala Tyr Leu Thr Ala Gln Pro Ala Pro Thr Ser Glu						
		675		680		685
Asp Leu Thr Ser Ala Thr Asn Ile Val Lys Trp Ile Thr Lys Gln Gln						

690	695	700
Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln Asp Thr Val Val Ala Leu 705 710 715 720		
His Ala Leu Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg Thr Gly Lys 725 730 735		
Ala Ala Gln Val Thr Ile Gln Ser Ser Gly Thr Phe Ser Ser Lys Phe 740 745 750		
Gln Val Asp Asn Asn Asn Arg Leu Leu Leu Gln Gln Val Ser Leu Pro 755 760 765		
Glu Leu Pro Gly Glu Tyr Ser Met Lys Val Thr Gly Glu Gly Cys Val 770 775 780		
Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu 785 790 795 800		
Phe Pro Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys Asp Glu 805 810 815		
Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser Tyr Thr 820 825 830		
Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val Lys Met Val 835 840 845		
Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser 850 855 860		
Asn His Val Ser Arg Thr Glu Val Ser Ser Asn His Val Leu Ile Tyr 865 870 875 880		
Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu Phe Phe Thr Val Leu 885 890 895		
Gln Asp Val Pro Val Arg Asp Leu Lys Pro Ala Ile Val Lys Val Tyr 900 905 910		
Asp Tyr Tyr Glu Thr Gly Glu Phe Ala Ile Ala Glu Tyr Asn Ala Pro 915 920 925		
Cys Ser Lys Asp Leu Gly Asn Ala 930 935		

<210> 36

<211> 898

<212> PRT

<213> Homo sapiens

<400> 36

Arg Leu Leu Ile Tyr Ala Val Leu Pro Thr Gly Asp Val Ile Gly Asp
1 5 10 15



Ser Ala Lys Tyr Asp Val Glu Asn Cys Leu Ala Asn Lys Val Asp Leu  
 20 25 30  
 Ser Phe Ser Pro Ser Gln Ser Leu Pro Ala Ser His Ala His Leu Arg  
 35 40 45  
 Val Thr Ala Ala Pro Gln Ser Val Cys Ala Leu Arg Ala Val Asp Gln  
 50 55 60  
 Ser Val Leu Leu Met Lys Pro Asp Ala Glu Leu Ser Ala Ser Ser Val  
 65 70 75 80  
 Tyr Asn Leu Leu Pro Glu Lys Asp Leu Thr Gly Phe Pro Gly Pro Leu  
 85 90 95  
 Asn Asp Gln Asp Asp Glu Asp Cys Ile Asn Arg His Asn Val Tyr Ile  
 100 105 110  
 Asn Gly Ile Thr Tyr Thr Pro Val Ser Ser Thr Asn Glu Lys Asp Met  
 115 120 125  
 Tyr Ser Phe Leu Glu Asp Met Gly Leu Lys Ala Phe Thr Asn Ser Lys  
 130 135 140  
 Ile Arg Lys Glu Glu Pro His Thr Glu Thr Val Arg Lys Tyr Phe Pro  
 145 150 155 160  
 Glu Thr Trp Ile Trp Asp Leu Val Val Val Asn Ser Ala Gly Val Ala  
 165 170 175  
 Glu Val Gly Val Thr Val Pro Asp Thr Ile Thr Glu Trp Lys Ala Gly  
 180 185 190  
 Ala Phe Cys Leu Ser Glu Asp Ala Gly Leu Gly Ile Ser Ser Thr Ala  
 195 200 205  
 Ser Leu Arg Ala Phe Gln Pro Phe Phe Val Glu Leu Thr Met Pro Tyr  
 210 215 220  
 Ser Val Ile Arg Gly Glu Ala Phe Thr Leu Lys Ala Thr Val Leu Asn  
 225 230 235 240  
 Tyr Leu Pro Lys Cys Ile Arg Val Ser Val Gln Leu Glu Ala Ser Pro  
 245 250 255  
 Ala Phe Leu Ala Val Pro Val Glu Lys Glu Gln Ala Pro His Cys Ile  
 260 265 270  
 Cys Ala Asn Gly Arg Gln Thr Val Ser Trp Ala Val Thr Pro Lys Ser  
 275 280 285  
 Leu Gly Asn Val Asn Phe Thr Val Ser Ala Glu Ala Leu Glu Ser Gln  
 290 295 300  
 Glu Leu Cys Gly Thr Glu Val Pro Ser Val Pro Glu His Gly Arg Lys  
 305 310 315 320

Asp	Thr	Val	Ile	Lys	Pro	Leu	Leu	Val	Glu	Pro	Glu	Gly	Leu	Glu	Lys	325	330	335	
Glu	Thr	Thr	Phe	Asn	Ser	Leu	Leu	Cys	Pro	Ser	Gly	Gly	Glu	Val	Ser	340	345	350	
Glu	Glu	Leu	Ser	Leu	Lys	Leu	Pro	Pro	Asn	Val	Val	Glu	Glu	Ser	Ala	355	360	365	
Arg	Ala	Ser	Val	Ser	Val	Leu	Gly	Asp	Ile	Leu	Gly	Ser	Ala	Met	Gln	370	375	380	
Asn	Thr	Gln	Asn	Leu	Leu	Gln	Met	Pro	Tyr	Gly	Cys	Gly	Glu	Gln	Asn	385	390	395	400
Met	Val	Leu	Phe	Ala	Pro	Asn	Ile	Tyr	Val	Leu	Asp	Tyr	Leu	Asn	Glu	405	410	415	
Thr	Gln	Gln	Leu	Thr	Pro	Glu	Val	Lys	Ser	Lys	Ala	Ile	Gly	Tyr	Leu	420	425	430	
Asn	Thr	Gly	Tyr	Gln	Arg	Gln	Leu	Asn	Tyr	Lys	His	Tyr	Asp	Gly	Ser	435	440	445	
Tyr	Ser	Thr	Phe	Gly	Glu	Arg	Tyr	Gly	Arg	Asn	Gln	Gly	Asn	Thr	Trp	450	455	460	
Leu	Thr	Ala	Phe	Val	Leu	Lys	Thr	Phe	Ala	Gln	Ala	Arg	Ala	Tyr	Ile	465	470	475	480
Phe	Ile	Asp	Glu	Ala	His	Ile	Thr	Gln	Ala	Leu	Ile	Trp	Leu	Ser	Gln	485	490	495	
Arg	Gln	Lys	Asp	Asn	Gly	Cys	Phe	Arg	Ser	Ser	Gly	Ser	Leu	Leu	Asn	500	505	510	
Asn	Ala	Ile	Lys	Gly	Gly	Val	Glu	Asp	Glu	Val	Thr	Leu	Ser	Ala	Tyr	515	520	525	
Ile	Thr	Ile	Ala	Leu	Leu	Glu	Ile	Pro	Leu	Thr	Val	Thr	His	Pro	Val	530	535	540	
Val	Arg	Asn	Ala	Leu	Phe	Cys	Leu	Glu	Ser	Ala	Trp	Lys	Thr	Ala	Gln	545	550	555	560
Glu	Gly	Asp	His	Gly	Ser	His	Val	Tyr	Thr	Lys	Ala	Leu	Leu	Ala	Tyr	565	570	575	
Ala	Phe	Ala	Leu	Ala	Gly	Asn	Gln	Asp	Lys	Arg	Lys	Glu	Val	Leu	Lys	580	585	590	
Ser	Leu	Asn	Glu	Glu	Ala	Val	Lys	Lys	Asp	Asn	Ser	Val	His	Trp	Glu	595	600	605	
Arg	Pro	Gln	Lys	Pro	Lys	Ala	Pro	Val	Gly	His	Phe	Tyr	Glu	Pro	Gln	610	615	620	

Ala Pro Ser Ala Glu Val Glu Met Thr Ser Tyr Val Leu Leu Ala Tyr  
 625 630 635 640  
 Leu Thr Ala Gln Pro Ala Pro Thr Ser Glu Asp Leu Thr Ser Ala Thr  
 645 650 655  
 Asn Ile Val Lys Trp Ile Thr Lys Gln Gln Asn Ala Gln Gly Gly Phe  
 660 665 670  
 Ser Ser Thr Gln Asp Thr Val Val Ala Leu His Ala Leu Ser Lys Tyr  
 675 680 685  
 Gly Ala Ala Thr Phe Thr Arg Thr Gly Lys Ala Ala Gln Val Thr Ile  
 690 695 700  
 Gln Ser Ser Gly Thr Phe Ser Ser Lys Phe Gln Val Asp Asn Asn Asn  
 705 710 715 720  
 Arg Leu Leu Leu Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr  
 725 730 735  
 Ser Met Lys Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu  
 740 745 750  
 Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly  
 755 760 765  
 Val Gln Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser  
 770 775 780  
 Phe Gln Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser  
 785 790 795 800  
 Asn Met Ala Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu  
 805 810 815  
 Lys Pro Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr  
 820 825 830  
 Glu Val Ser Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn  
 835 840 845  
 Gln Thr Leu Ser Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg  
 850 855 860  
 Asp Leu Lys Pro Ala Ile Val Lys Val Tyr Asp Tyr Tyr Glu Thr Asp  
 865 870 875 880  
 Glu Phe Ala Ile Ala Glu Tyr Asn Ala Pro Cys Ser Lys Asp Leu Gly  
 885 890 895  
 Asn Ala

<210> 37  
 <211> 936

<212> PRT

<213> Homo sapiens

<400> 37

Arg Leu Leu Ile Tyr Ala Val Leu Pro Thr Gly Asp Val Ile Gly Asp  
1 5 10 15

Ser Ala Lys Tyr Asp Val Glu Asn Glu Leu Ala Asn Lys Val Asp Leu  
20 25 30

Ser Phe Ser Pro Ser Gln Ser Leu Pro Ala Ser His Ala His Leu Arg  
35 40 45

Val Thr Ala Ala Pro Gln Ser Val Cys Ala Leu Arg Ala Val Asp Gln  
50 55 60

Ser Val Leu Leu Met Lys Pro Asp Ala Glu Leu Ser Ala Ser Ser Val  
65 70 75 80

Tyr Asn Leu Leu Pro Glu Lys Asp Leu Thr Gly Phe Pro Gly Pro Leu  
85 90 95

Asn Asp Gln Asp Asp Glu Asp Cys Ile Asn Arg His Asn Val Tyr Ile  
100 105 110

Asn Gly Ile Thr Tyr Thr Pro Val Ser Ser Thr Asn Glu Lys Asp Met  
115 120 125

Tyr Ser Phe Leu Glu Asp Met Gly Leu Lys Ala Phe Thr Asn Ser Lys  
130 135 140

Ile Arg Lys Pro Lys Met Cys Pro Gln Leu Gln Gln Tyr Glu Met His  
145 150 155 160

Gly Pro Glu Gly Leu Arg Val Gly Phe Tyr Glu Ser Asp Val Met Gly  
165 170 175

Arg Gly His Ala Arg Leu Val His Val Glu Glu Pro His Thr Glu Thr  
180 185 190

Val Arg Lys Tyr Phe Pro Glu Thr Trp Ile Trp Asp Leu Val Val Val  
195 200 205

Asn Ser Ala Gly Val Ala Glu Val Gly Val Thr Val Pro Asp Thr Ile  
210 215 220

Thr Glu Trp Lys Ala Gly Ala Phe Cys Leu Ser Glu Asp Ala Gly Leu  
225 230 235 240

Gly Ile Ser Ser Thr Ala Ser Leu Arg Ala Phe Gln Pro Phe Phe Val  
245 250 255

Glu Leu Thr Met Pro Tyr Ser Val Ile Arg Gly Glu Ala Phe Thr Leu  
260 265 270

Lys Ala Thr Val Leu Asn Tyr Leu Pro Lys Cys Ile Arg Val Ser Val  
275 280 285

Gln Leu Glu Ala Ser Pro Ala Phe Leu Ala Val Pro Val Glu Lys Glu  
 290 295 300  
 Gln Ala Pro His Cys Ile Cys Ala Asn Gly Arg Gln Thr Val Ser Trp  
 305 310 315 320  
 Ala Val Thr Pro Lys Ser Leu Gly Asn Val Asn Phe Thr Val Ser Ala  
 325 330 335  
 Glu Ala Leu Glu Ser Gln Glu Leu Cys Gly Thr Glu Val Pro Ser Val  
 340 345 350  
 Pro Glu His Gly Arg Lys Asp Thr Val Ile Lys Pro Leu Leu Val Glu  
 355 360 365  
 Pro Glu Gly Leu Glu Lys Glu Thr Thr Phe Asn Ser Leu Leu Cys Pro  
 370 375 380  
 Ser Gly Gly Glu Val Ser Glu Glu Leu Ser Leu Lys Leu Pro Pro Asn  
 385 390 395 400  
 Val Val Glu Glu Ser Ala Arg Ala Ser Val Ser Val Leu Gly Asp Ile  
 405 410 415  
 Leu Gly Ser Ala Met Gln Asn Thr Gln Asn Leu Leu Gln Met Pro Tyr  
 420 425 430  
 Gly Cys Gly Glu Glx Asn Met Val Leu Phe Ala Pro Asn Ile Tyr Val  
 435 440 445  
 Leu Asp Tyr Leu Asn Glu Thr Gln Gln Leu Thr Pro Glu Ile Lys Ser  
 450 455 460  
 Lys Ala Ile Gly Tyr Leu Asn Thr Gly Tyr Gln Arg Gln Leu Asn Tyr  
 465 470 475 480  
 Lys His Tyr Asp Gly Ser Tyr Ser Thr Phe Gly Glu Arg Tyr Gly Arg  
 485 490 495  
 Asn Gln Gly Asn Thr Trp Leu Thr Ala Phe Val Leu Lys Thr Phe Ala  
 500 505 510  
 Gln Ala Arg Ala Tyr Ile Phe Ile Asp Glu Ala His Ile Thr Gln Ala  
 515 520 525  
 Leu Ile Trp Leu Ser Gln Arg Gln Lys Asp Asn Gly Cys Phe Arg Ser  
 530 535 540  
 Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys Gly Gly Val Glu Asp Glu  
 545 550 555 560  
 Val Thr Leu Ser Ala Tyr Ile Lys Ile Ala Leu Leu Glu Ile Pro Leu  
 565 570 575  
 Thr Val Thr His Pro Val Val Arg Asn Ala Leu Phe Cys Leu Glu Ser  
 580 585 590

Ala	Trp	Lys	Thr	Ala	Glu	Glu	Gly	Asp	His	Gly	Ser	His	Val	Tyr	Thr	595	600	605
Lys	Ala	Leu	Leu	Ala	Tyr	Ala	Phe	Ala	Leu	Ala	Gly	Asn	Gln	Asp	Lys	610	615	620
Arg	Lys	Glu	Val	Leu	Lys	Ser	Leu	Asn	Glu	Glu	Ala	Val	Lys	Lys	Asp	625	630	635
Asn	Ser	Val	His	Trp	Glu	Arg	Pro	Gln	Lys	Pro	Lys	Ala	Pro	Val	Gly	645	650	655
His	Phe	Tyr	Glu	Pro	Gln	Ala	Pro	Ser	Ala	Glu	Val	Glu	Met	Thr	Ser	660	665	670
Tyr	Val	Leu	Leu	Ala	Tyr	Leu	Thr	Ala	Gln	Pro	Ala	Pro	Thr	Ser	Glu	675	680	685
Asp	Leu	Thr	Ser	Ala	Thr	Asn	Ile	Val	Lys	Trp	Ile	Thr	Lys	Gln	Gln	690	695	700
Asn	Ala	Gln	Gly	Gly	Phe	Ser	Ser	Thr	Gln	Asp	Lys	Val	Val	Ala	Leu	705	710	715
His	Ala	Leu	Ser	Lys	Tyr	Gly	Ala	Ala	Thr	Phe	Thr	Arg	Thr	Gly	Lys	725	730	735
Ala	Ala	Gln	Val	Thr	Ile	Gln	Ser	Ser	Gly	Thr	Phe	Ser	Ser	Lys	Phe	740	745	750
Gln	Val	Asp	Asn	Asn	Asn	Arg	Leu	Leu	Leu	Gln	Gln	Val	Ser	Leu	Pro	755	760	765
Glu	Leu	Pro	Gly	Glu	Tyr	Ser	Met	Lys	Val	Thr	Gly	Glu	Gly	Cys	Val	770	775	780
Tyr	Leu	Gln	Thr	Ser	Leu	Lys	Tyr	Asn	Ile	Leu	Pro	Glu	Lys	Glu	Glu	785	790	795
Phe	Pro	Phe	Ala	Leu	Gly	Val	Gln	Thr	Leu	Pro	Gln	Thr	Cys	Asp	Glu	805	810	815
Pro	Lys	Ala	His	Thr	Ser	Phe	Gln	Ile	Ser	Leu	Ser	Val	Ser	Tyr	Thr	820	825	830
Gly	Ser	Arg	Ser	Ala	Ser	Asn	Met	Ala	Ile	Val	Asp	Val	Lys	Met	Val	835	840	845
Ser	Gly	Phe	Ile	Pro	Leu	Lys	Pro	Thr	Val	Lys	Met	Leu	Glu	Arg	Ser	850	855	860
Asn	His	Val	Ser	Arg	Thr	Glu	Val	Ser	Ser	Asn	His	Val	Leu	Ile	Tyr	865	870	875
Leu	Asp	Lys	Val	Ser	Asn	Gln	Thr	Leu	Ser	Leu	Phe	Phe	Thr	Val	Leu	885	890	895

Gln Asp Val Pro Val Arg Asp Leu Lys Pro Ala Ile Val Lys Val Tyr  
 900 905 910

Asp Tyr Tyr Glu Thr Asp Glu Phe Ala Ile Ala Glu Tyr Asn Ala Pro  
 915 920 925

Cys Ser Lys Asp Leu Gly Asn Ala  
 930 935

<210> 38

<211> 931

<212> PRT

<213> Rattus norvegicus

<400> 38

Arg Leu Val Leu Tyr Ala Ile Leu Pro Asn Gly Glu Val Val Gly Asp  
 1 5 10 15

Thr Ala Lys Tyr Glu Ile Glu Asn Cys Leu Ala Asn Lys Val Asp Leu  
 20 25 30

Val Phe Arg Pro Asn Ser Gly Leu Pro Ala Thr Arg Ala Leu Leu Ser  
 35 40 45

Val Met Ala Ser Pro Gln Ser Leu Cys Gly Leu Arg Ala Val Asp Gln  
 50 55 60

Ser Val Leu Leu Met Lys Pro Glu Thr Glu Leu Ser Ala Ser Leu Ile  
 65 70 75 80

Tyr Asp Leu Leu Pro Val Lys Asp Leu Thr Gly Phe Pro Gln Gly Ala  
 85 90 95

Asp Gln Arg Glu Glu Asp Thr Asn Gly Cys Val Lys Gln Asn Asp Thr  
 100 105 110

Tyr Ile Asn Gly Ile Leu Tyr Ser Pro Val Gln Asn Thr Asn Glu Glu  
 115 120 125

Asp Met Tyr Gly Phe Leu Lys Asp Met Gly Leu Lys Val Phe Thr Asn  
 130 135 140

Ser Asn Ile Arg Lys Pro Lys Val Cys Glu Arg Leu Arg Asp Asn Lys  
 145 150 155 160

Gly Ile Pro Ala Ala Tyr His Leu Val Ser Gln Ser His Met Asp Ala  
 165 170 175

Phe Leu Glu Ser Ser Glu Ser Pro Thr Glu Thr Arg Arg Ser Tyr Phe  
 180 185 190

Pro Glu Thr Trp Ile Trp Asp Leu Val Val Val Asp Ser Ala Gly Val  
 195 200 205

Ala Glu Val Glu Val Thr Val Pro Asp Thr Ile Thr Glu Trp Lys Ala

210	215	220
Gly Ala Phe Cys Leu Ser Asn Asp Thr Gly Leu Gly Leu Ser Pro Val		
225	230	235 240
Val Gln Phe Gln Ala Phe Gln Pro Phe Phe Val Glu Leu Thr Met Pro		
	245	250 255
Tyr Ser Val Ile Arg Gly Glu Ala Phe Thr Leu Lys Ala Thr Val Leu		
	260	265 270
Asn Tyr Leu Pro Thr Cys Ile Arg Val Ala Val Gln Leu Glu Ala Ser		
	275	280 285
Pro Asp Phe Leu Ala Ala Pro Glu Glu Lys Glu Gln Arg Ser His Cys		
	290	295 300
Ile Cys Met Asn Gln Arg His Thr Ala Ser Trp Ala Val Ile Pro Lys		
305	310	315 320
Ser Leu Gly Asn Val Asn Phe Thr Val Ser Ala Glu Ala Leu Asn Ser		
	325	330 335
Lys Glu Leu Cys Gly Asn Glu Val Pro Val Val Pro Glu Gln Gly Lys		
	340	345 350
Lys Asp Thr Ile Ile Lys Ser Leu Leu Val Glu Pro Glu Gly Leu Glu		
	355	360 365
Asn Glu Val Thr Phe Asn Ser Leu Leu Cys Pro Met Gly Ala Glu Val		
	370	375 380
Ser Glu Leu Ile Ala Leu Lys Leu Pro Ser Asp Val Val Glu Glu Ser		
385	390	395 400
Ala Arg Ala Ser Val Thr Val Leu Gly Asp Ile Leu Gly Ser Ala Met		
	405	410 415
Gln Asn Thr Gln Asp Leu Leu Lys Met Pro Tyr Gly Cys Gly Glu Gln		
	420	425 430
Asn Met Val Leu Phe Ala Pro Asn Ile Tyr Val Leu Asp Tyr Leu Asn		
	435	440 445
Glu Thr Gln Gln Leu Thr Gln Glu Ile Lys Thr Lys Ala Ile Ala Tyr		
	450	455 460
Leu Asn Thr Gly Tyr Gln Arg Gln Leu Asn Tyr Lys His Arg Asp Gly		
465	470	475 480
Ser Tyr Ser Ala Phe Gly Asp Lys Pro Gly Arg Asn His Ala Asn Thr		
	485	490 495
Trp Leu Thr Ala Phe Val Leu Lys Ser Phe Ala Gln Ala Arg Lys Tyr		
	500	505 510
Ile Phe Ile Asp Glu Val His Ile Thr Gln Ala Leu Leu Trp Leu Ser		



515					520					525					
Gln	Gln	Gln	Lys	Asp	Asn	Gly	Cys	Phe	Arg	Ser	Ser	Gly	Ser	Leu	Leu
530						535					540				
Asn	Asn	Ala	Met	Lys	Gly	Gly	Val	Glu	Asp	Glu	Val	Thr	Leu	Ser	Ala
545					550					555					560
Tyr	Ile	Thr	Ile	Ala	Leu	Leu	Glu	Met	Ser	Leu	Pro	Val	Thr	His	Pro
				565					570					575	
Val	Val	Arg	Asn	Ala	Leu	Phe	Cys	Leu	Asp	Thr	Ala	Trp	Lys	Ser	Ala
			580						585				590		
Arg	Gly	Gly	Ala	Gly	Gly	Ser	His	Val	Tyr	Thr	Lys	Ala	Leu	Leu	Ala
			595				600					605			
Tyr	Ala	Phe	Ala	Leu	Ala	Gly	Pro	Val	Val	Arg	Asn	Ala	Leu	Phe	Cys
	610					615					620				
Leu	Asp	Thr	Ala	Trp	Lys	Ser	Ala	Arg	Gly	Gly	Ala	Gly	Gly	Ser	His
625					630					635					640
Val	Tyr	Thr	Lys	Ala	Leu	Leu	Ala	Tyr	Ala	Phe	Ala	Leu	Ala	Gly	Pro
				645					650					655	
Gln	Ala	Thr	Ser	Ala	Glu	Val	Glu	Met	Thr	Ala	Tyr	Val	Leu	Leu	Ala
			660					665					670		
Tyr	Leu	Thr	Thr	Glu	Pro	Ala	Pro	Thr	Gln	Glu	Asp	Leu	Thr	Ala	Ala
		675					680					685			
Met	Leu	Ile	Val	Lys	Trp	Leu	Thr	Lys	Gln	Gln	Asn	Ser	His	Gly	Gly
	690					695					700				
Phe	Ser	Ser	Thr	Gln	Asp	Thr	Val	Val	Ala	Leu	His	Ala	Leu	Ser	Lys
705					710					715					720
Tyr	Gly	Ser	Ala	Thr	Phe	Thr	Arg	Ala	Lys	Lys	Ala	Ala	Gln	Val	Thr
				725					730					735	
Ile	Arg	Ser	Ser	Gly	Thr	Phe	Ser	Thr	Lys	Phe	Gln	Val	Asn	Asn	Asn
				740				745					750		
Asn	Gln	Leu	Leu	Leu	Gln	Arg	Val	Thr	Leu	Pro	Thr	Val	Pro	Gly	Asp
		755					760					765			
Tyr	Thr	Val	Lys	Val	Thr	Gly	Glu	Gly	Cys	Val	Tyr	Leu	Gln	Thr	Ser
	770					775					780				
Leu	Lys	Tyr	Ser	Val	Leu	Pro	Arg	Glu	Glu	Glu	Phe	Pro	Phe	Ala	Val
785					790					795					800
Val	Val	Gln	Thr	Leu	Pro	Gly	Thr	Cys	Glu	Asp	Pro	Lys	Ala	His	Thr
				805					810					815	
Ser	Phe	Gln	Ile	Ser	Leu	Asn	Ile	Ser	Tyr	Thr	Gly	Ser	Arg	Ser	Glu

	820		825		830
Ser	Asn Met Ala Ile Ala Asp Val Lys Met Val Ser Gly Phe Ile Pro				
	835		840		845
Leu	Lys Pro Thr Val Lys Met Leu Glu Arg Ser Val His Val Ser Arg				
	850		855		860
Thr	Glu Val Ser Asn Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser				
	865		870		875 880
Asn	Gln Thr Val Asn Leu Ser Phe Thr Val Gln Gln Asp Ile Pro Ile				
		885		890	895
Arg	Asp Leu Lys Pro Ala Val Val Lys Val Tyr Asp Tyr Tyr Glu Lys				
	900		905		910
Asp	Glu Phe Ala Val Ala Lys Tyr Ser Ala Pro Cys Ser Thr Asp Tyr				
	915		920		925
Gly	Asn Ala				
	930				

<210> 39  
 <211> 941  
 <212> PRT  
 <213> Cavia porcellus

<400> 39

Arg	Val	Leu	Ile	Tyr	Ala	Ile	Leu	Pro	Ser	Gly	Glu	Ile	Ile	Ala	Asp
1				5				10						15	
Ser	Ala	Lys	Tyr	Asn	Val	Glu	Asn	Cys	Leu	Asp	Asn	Lys	Val	Asn	Leu
		20					25						30		
Ser	Phe	Ser	Glu	Gly	Gln	Ser	Leu	Pro	Ala	Ser	Lys	Thr	His	Leu	Arg
	35						40					45			
Val	Thr	Ala	Ser	Pro	Gln	Ser	Leu	Cys	Ala	Leu	Arg	Ala	Val	Asp	Gln
	50					55					60				
Ser	Val	Leu	Leu	Arg	Lys	Pro	Glu	Ala	Val	Leu	Ser	Ala	Ser	Ser	Val
	65				70					75				80	
Tyr	Ala	Leu	Leu	Pro	Val	Lys	Asp	Leu	Thr	Gly	Phe	Pro	Gly	Leu	Leu
				85					90					95	
Gly	Gln	Gln	Glu	Glu	Asn	Asp	Gly	Glu	Cys	Val	Ser	Leu	Tyr	Asn	Thr
			100				105						110		
Tyr	Ile	Asp	Gly	Ile	Leu	Tyr	Ser	Pro	Glu	Pro	Asn	Ile	Asn	Glu	Lys
	115						120					125			
Asp	Met	Tyr	Gly	Phe	Leu	Lys	Asp	Met	Gly	Leu	Lys	Val	Phe	Thr	Asn
	130					135					140				

Thr	Lys	Ile	Gln	Lys	Pro	Gln	Leu	Cys	Ala	His	Val	Gln	Lys	Phe	Glu	145	150	155	160
Val	Pro	Thr	Met	Ala	Tyr	Ser	Tyr	Ser	Glu	Ser	Ser	Ser	Phe	Arg	Ser	165	170	175	
Gly	Pro	Arg	Arg	Val	Pro	Ala	Val	Gly	Ile	Ala	Ala	Thr	Tyr	Ser	Glu	180	185	190	
Pro	Pro	Lys	Glu	Thr	Val	Arg	Thr	Tyr	Ser	Pro	Glu	Thr	Trp	Ile	Trp	195	200	205	
Asp	Leu	Lys	Val	Thr	Asp	Ser	Ser	Gly	Val	Ala	Glu	Val	Glu	Val	Thr	210	215	220	
Val	Pro	Asp	Thr	Ile	Thr	Glu	Trp	Lys	Ala	Gly	Ala	Phe	Cys	Leu	Ser	225	230	235	240
Asn	Asp	Thr	Gly	Leu	Gly	Leu	Ser	Pro	Thr	Ala	Ser	Leu	Arg	Ala	Phe	245	250	255	
Gln	Pro	Phe	Phe	Val	Glu	Leu	Thr	Met	Pro	Tyr	Ser	Val	Ile	Arg	Gly	260	265	270	
Glu	Ala	Phe	Thr	Leu	Lys	Ala	Thr	Val	Leu	Asn	Tyr	Leu	Pro	Asp	Cys	275	280	285	
Ile	Arg	Ile	Ser	Val	His	Leu	Glu	Ala	Ser	Pro	Lys	Phe	Leu	Ala	Glu	290	295	300	
Pro	Lys	Ala	Lys	Glu	Gln	Glu	Ser	Tyr	Cys	Val	Cys	Gly	Asn	Glu	Arg	305	310	315	320
Gln	Thr	Val	Ser	Trp	Val	Val	Thr	Pro	Lys	Ser	Leu	Gly	Asn	Val	Asn	325	330	335	
Phe	Thr	Val	Ser	Ala	Glu	Ala	Leu	Glu	Ser	Ser	Glu	Leu	Cys	Gly	Asn	340	345	350	
Glu	Lys	Thr	Val	Val	Pro	Thr	Tyr	Gly	Lys	Lys	Asp	Thr	Ile	Ile	Lys	355	360	365	
Pro	Leu	Leu	Val	Glu	Pro	Glu	Gly	Ile	Glu	Lys	Glu	Glu	Thr	Trp	Thr	370	375	380	
Ser	Leu	Ile	Arg	Val	Ser	Asp	Thr	Thr	Val	Ser	Glu	Lys	Leu	His	Leu	385	390	395	400
Glu	Leu	Pro	Ser	Asn	Val	Ile	Gln	Asp	Ser	Ala	Arg	Ala	Thr	Val	Ser	405	410	415	
Ile	Leu	Gly	Asp	Ile	Leu	Gly	Ser	Ala	Met	Gln	Asn	Ile	Gln	Asn	Leu	420	425	430	
Leu	Gln	Met	Pro	Tyr	Gly	Cys	Gly	Glu	Gln	Asn	Met	Val	Leu	Phe	Ala	435	440	445	

Pro Asn Ile Tyr Val Leu Asp Tyr Leu Asn Glu Thr Gln Gln Leu Thr  
 450 455 460  
 Pro Asp Ile Lys Ser Lys Ala Ile Ser Tyr Leu Ser Thr Gly Tyr Gln  
 465 470 475 480  
 Arg Gln Leu Asn Tyr Lys His Arg Asp Gly Ser Tyr Ser Thr Phe Gly  
 485 490 495  
 Glu Asn Tyr Arg Gly Gly Gln Gly Asn Thr Trp Leu Thr Ala Phe Val  
 500 505 510  
 Leu Lys Thr Phe Ser Gln Ala Arg Lys Tyr Ile Phe Ile Asp Glu Ala  
 515 520 525  
 His Ile Thr Gln Ala Leu Ser Trp Leu Ser Gln Lys Gln Lys Asp Asn  
 530 535 540  
 Gly Cys Phe Trp Ser Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys Gly  
 545 550 555 560  
 Gly Val Glu Asp Glu Ile Ser Leu Ser Ala Tyr Ile Thr Ile Ala Leu  
 565 570 575  
 Leu Glu Met Ser Leu Pro Asp Thr His Pro Val Val Arg Asn Ala Leu  
 580 585 590  
 Phe Cys Leu Glu Ser Ala Trp Lys Ser Ala Lys Glu Gly Thr His Gly  
 595 600 605  
 Ser His Val Tyr Thr Lys Ala Leu Leu Ala Tyr Ala Phe Ala Leu Ala  
 610 615 620  
 Gly Asn Gln Glu Arg Lys Lys Glu Ile Leu Lys Ser Leu Glu Asp Glu  
 625 630 635 640  
 Gly Val Lys Glu Asp Asn Ser Leu His Trp Ala Arg Pro Gln Lys Pro  
 645 650 655  
 Lys Val Ser Glu Gly Phe Leu Phe Lys Ser Gln Ala Pro Ser Ala Glu  
 660 665 670  
 Val Glu Met Thr Ser Tyr Val Leu Leu Ala Tyr Leu Thr Ala Arg Pro  
 675 680 685  
 Ala Pro Thr Pro Glu Asp Leu Thr Ser Ala Thr Asp Ile Val Asn Trp  
 690 695 700  
 Val Thr Lys Gln Gln Asn Ser His Gly Gly Tyr Ser Ser Thr Gln Asp  
 705 710 715 720  
 Thr Val Val Ala Leu His Ala Leu Ser Lys Tyr Ala Ala Ala Thr Phe  
 725 730 735  
 Thr Arg Thr Glu Lys Ala Ala Gln Val Thr Ile Lys Ser Ser Gly Thr  
 740 745 750

Phe Ser Thr Asn Phe Glu Val Asn His Asn Asn Arg Leu Leu Leu Gln  
 755 760 765  
 Gln Val Ser Leu Pro Thr Val Ser Asp Ser Tyr Thr Ile Thr Val Thr  
 770 775 780  
 Gly Glu Gly Asn Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Val Pro  
 785 790 795 800  
 Ser Glu Lys Gly Thr Phe Pro Phe Ala Leu Glu Ala Glu Thr Val Pro  
 805 810 815  
 Gln Ala Cys Asp Gly Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu  
 820 825 830  
 Asn Val Ser Tyr Ile Gly Ser Arg Pro Val Ser Asn Met Ala Ile Val  
 835 840 845  
 Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys  
 850 855 860  
 Asn Leu Glu Lys Ser Glu His Ile Ser Arg Thr Glu Val Ser Asn Asn  
 865 870 875 880  
 His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu  
 885 890 895  
 Ser Phe Phe Val Val Gln Asp Ile Glu Val Arg Asp Leu Lys Pro Ala  
 900 905 910  
 Ile Ile Lys Val Tyr Asp Tyr Tyr Glu Thr Asn Glu Phe Ala Ile Ala  
 915 920 925  
 Glu Tyr His Ala Pro Cys Ser Lys Asp Pro Gly Asn Ala  
 930 935 940

<210> 40  
 <211> 373  
 <212> PRT  
 <213> Mus musculus

<400> 40  
 Met Ser Thr Asp Cys Ala Gly Asn Ser Thr Cys Pro Val Asn Ser Thr  
 1 5 10 15  
 Glu Glu Asp Pro Pro Val Gly Met Glu Gly His Ala Asn Leu Lys Leu  
 20 25 30  
 Leu Phe Thr Val Leu Ser Ala Val Met Val Gly Leu Val Met Phe Ser  
 35 40 45  
 Phe Gly Cys Ser Val Glu Ser Gln Lys Leu Trp Leu His Leu Arg Arg  
 50 55 60  
 Pro Trp Gly Ile Ala Val Gly Leu Leu Ser Gln Phe Gly Leu Met Pro  
 65 70 75 80

Leu Thr Ala Tyr Leu Leu Ala Ile Gly Phe Gly Leu Lys Pro Phe Gln  
 85 90 95  
 Ala Ile Ala Val Leu Met Met Gly Ser Cys Pro Gly Gly Thr Ile Ser  
 100 105 110  
 Asn Val Leu Thr Phe Trp Val Asp Gly Asp Met Asp Leu Ser Ile Ser  
 115 120 125  
 Met Thr Thr Cys Ser Thr Val Ala Ala Leu Gly Met Met Pro Leu Cys  
 130 135 140  
 Leu Tyr Ile Tyr Thr Arg Ser Trp Thr Leu Thr Gln Asn Leu Val Ile  
 145 150 155 160  
 Pro Tyr Gln Ser Ile Gly Ile Thr Leu Val Ser Leu Val Val Pro Val  
 165 170 175  
 Ala Ser Gly Val Tyr Val Asn Tyr Arg Trp Pro Lys Gln Ala Thr Val  
 180 185 190  
 Ile Leu Lys Val Gly Ala Ile Leu Gly Gly Met Leu Leu Leu Val Val  
 195 200 205  
 Ala Val Thr Gly Met Val Leu Ala Lys Gly Trp Asn Thr Asp Val Thr  
 210 215 220  
 Leu Leu Val Ile Ser Cys Ile Phe Pro Leu Val Gly His Val Thr Gly  
 225 230 235 240  
 Phe Leu Leu Ala Phe Leu Thr His Gln Ser Trp Gln Arg Cys Arg Thr  
 245 250 255  
 Ile Ser Ile Glu Thr Gly Ala Gln Asn Ile Gln Leu Cys Ile Ala Met  
 260 265 270  
 Leu Gln Leu Ser Phe Ser Ala Glu Tyr Leu Val Gln Leu Leu Asn Phe  
 275 280 285  
 Ala Leu Ala Tyr Gly Leu Phe Gln Val Leu His Gly Leu Leu Ile Val  
 290 295 300  
 Ala Ala Tyr Gln Ala Tyr Lys Arg Arg Gln Lys Ser Lys Cys Arg Arg  
 305 310 315 320  
 Gln His Pro Asp Cys Pro Asp Val Cys Tyr Glu Lys Gln Pro Arg Glu  
 325 330 335  
 Thr Ser Ala Phe Leu Asp Lys Gly Asp Glu Ala Ala Val Thr Leu Gly  
 340 345 350  
 Pro Val Gln Pro Glu Gln His His Arg Ala Ala Glu Leu Thr Ser His  
 355 360 365  
 Ile Pro Ser Cys Glu  
 370

<210> 41  
 <211> 347  
 <212> PRT  
 <213> *Oryzctolagus cuniculus*

<400> 41

Met	Ser	Asn	Leu	Thr	Val	Gly	Cys	Leu	Ala	Asn	Ala	Thr	Val	Cys	Glu
1				5				10						15	
Gly	Ala	Ser	Cys	Val	Ala	Pro	Glu	Ser	Asn	Phe	Asn	Ala	Ile	Leu	Ser
			20					25					30		
Val	Val	Leu	Ser	Thr	Val	Leu	Thr	Ile	Leu	Leu	Ala	Leu	Val	Met	Phe
		35					40					45			
Ser	Met	Gly	Cys	Asn	Val	Glu	Ile	Lys	Lys	Phe	Leu	Gly	His	Ile	Arg
	50					55					60				
Arg	Pro	Trp	Gly	Ile	Phe	Ile	Gly	Phe	Leu	Cys	Gln	Phe	Gly	Ile	Met
65					70					75					80
Pro	Leu	Thr	Gly	Phe	Val	Leu	Ala	Val	Ala	Phe	Gly	Ile	Met	Pro	Ile
				85					90					95	
Gln	Ala	Val	Val	Val	Leu	Ile	Met	Gly	Cys	Cys	Pro	Gly	Gly	Thr	Ala
			100					105					110		
Ser	Asn	Ile	Leu	Ala	Tyr	Trp	Val	Asp	Gly	Asp	Met	Asp	Leu	Ser	Val
		115					120					125			
Ser	Met	Thr	Thr	Cys	Ser	Thr	Leu	Leu	Ala	Leu	Gly	Met	Met	Pro	Leu
	130					135					140				
Cys	Leu	Tyr	Val	Tyr	Thr	Lys	Met	Trp	Val	Asp	Ser	Gly	Thr	Ile	Val
145					150					155					160
Ile	Pro	Tyr	Asp	Asn	Ile	Gly	Thr	Ser	Leu	Val	Ala	Leu	Val	Val	Pro
				165					170					175	
Val	Ser	Ile	Gly	Met	Phe	Val	Asn	His	Lys	Trp	Pro	Gln	Lys	Ala	Lys
			180					185					190		
Ile	Ile	Leu	Lys	Val	Gly	Ser	Ile	Ala	Gly	Ala	Val	Leu	Ile	Val	Leu
		195					200					205			
Ile	Ala	Val	Val	Gly	Gly	Ile	Leu	Tyr	Gln	Ser	Ala	Trp	Ile	Ile	Glu
	210					215					220				
Pro	Lys	Leu	Trp	Ile	Ile	Gly	Thr	Ile	Phe	Pro	Met	Ala	Gly	Tyr	Ser
225					230					235					240
Leu	Gly	Phe	Phe	Leu	Ala	Arg	Ile	Ala	Gly	Gln	Pro	Trp	Tyr	Arg	Cys
				245					250					255	
Arg	Thr	Val	Ala	Leu	Glu	Thr	Gly	Met	Gln	Asn	Thr	Gln	Leu	Cys	Ser

260										265					270				
Thr	Ile	Val	Gln	Leu	Ser	Phe	Ser	Pro	Glu	Asp	Leu	Thr	Tyr	Val	Phe				
		275						280					285						
Thr	Phe	Pro	Leu	Ile	Tyr	Ser	Ile	Phe	Gln	Ile	Ala	Phe	Ala	Ala	Ile				
	290					295					300								
Phe	Leu	Gly	Ile	Tyr	Val	Ala	Tyr	Arg	Lys	Cys	His	Gly	Lys	Asn	Asp				
305					310					315					320				
Ala	Glu	Phe	Pro	Asp	Ile	Lys	Asp	Thr	Lys	Thr	Glu	Pro	Glu	Ser	Ser				
				325					330					335					
Phe	His	Gln	Met	Asn	Gly	Gly	Phe	Gln	Pro	Glu									
			340					345											
<210> 42																			
<211> 348																			
<212> PRT																			
<213> Rattus norvegicus																			
<400> 42																			
Met	Asp	Asn	Ser	Ser	Val	Cys	Ser	Pro	Asn	Ala	Thr	Phe	Cys	Glu	Gly				
1				5					10					15					
Asp	Ser	Cys	Leu	Val	Thr	Glu	Ser	Asn	Phe	Asn	Ala	Ile	Leu	Ser	Thr				
		20						25					30						
Val	Met	Ser	Thr	Val	Leu	Thr	Ile	Leu	Leu	Ala	Met	Val	Met	Phe	Ser				
		35					40					45							
Met	Gly	Cys	Asn	Val	Glu	Ile	Asn	Lys	Phe	Leu	Gly	His	Ile	Lys	Arg				
	50					55					60								
Pro	Trp	Gly	Ile	Phe	Val	Gly	Phe	Leu	Cys	Gln	Phe	Gly	Ile	Met	Pro				
65					70					75					80				
Leu	Thr	Gly	Phe	Ile	Leu	Ser	Val	Ala	Ser	Gly	Ile	Leu	Pro	Val	Gln				
			85					90						95					
Ala	Val	Val	Val	Leu	Ile	Met	Gly	Cys	Cys	Pro	Gly	Gly	Thr	Gly	Ser				
			100					105					110						
Asn	Ile	Leu	Ala	Tyr	Trp	Ile	Asp	Gly	Asp	Met	Asp	Leu	Ser	Val	Ser				
		115					120					125							
Met	Thr	Thr	Cys	Ser	Thr	Leu	Leu	Ala	Leu	Gly	Met	Met	Pro	Leu	Cys				
		130				135					140								
Leu	Phe	Ile	Tyr	Thr	Lys	Met	Trp	Val	Asp	Ser	Gly	Thr	Ile	Val	Ile				
145					150					155					160				
Pro	Tyr	Asp	Ser	Ile	Gly	Ile	Ser	Leu	Val	Ala	Leu	Val	Ile	Pro	Val				
				165					170					175					



Ser Ile Gly Met Phe Val Asn His Lys Trp Pro Gln Lys Ala Lys Ile  
 180 185 190  
 Ile Leu Lys Ile Gly Ser Ile Ala Gly Ala Ile Leu Ile Val Leu Ile  
 195 200 205  
 Ala Val Val Gly Gly Ile Leu Tyr Gln Ser Ala Trp Ile Ile Glu Pro  
 210 215 220  
 Lys Leu Trp Ile Ile Gly Thr Ile Phe Pro Ile Ala Gly Tyr Ser Leu  
 225 230 235 240  
 Gly Phe Phe Leu Ala Arg Leu Ala Gly Gln Pro Trp Tyr Arg Cys Arg  
 245 250 255  
 Thr Val Ala Leu Glu Thr Gly Met Gln Asn Thr Gln Leu Cys Ser Thr  
 260 265 270  
 Ile Val Gln Leu Ser Phe Ser Pro Glu Asp Leu Asn Leu Val Phe Thr  
 275 280 285  
 Phe Pro Leu Ile Tyr Thr Val Phe Gln Leu Val Phe Ala Ala Ile Ile  
 290 295 300  
 Leu Gly Met Tyr Val Thr Tyr Lys Lys Cys His Gly Lys Asn Asp Ala  
 305 310 315 320  
 Glu Phe Leu Glu Lys Thr Asp Asn Asp Met Asp Pro Met Pro Ser Phe  
 325 330 335  
 Gln Glu Thr Asn Lys Gly Phe Gln Pro Asp Glu Lys  
 340 345

<210> 43

<211> 348

<212> PRT

<213> Mus musculus

<400> 43

Met Asp Asn Ser Ser Val Cys Pro Pro Asn Ala Thr Val Cys Glu Gly  
 1 5 10 15  
 Asp Ser Cys Val Val Pro Glu Ser Asn Phe Asn Ala Ile Leu Asn Thr  
 20 25 30  
 Val Met Ser Thr Val Leu Thr Ile Leu Leu Ala Met Val Met Phe Ser  
 35 40 45  
 Met Gly Cys Asn Val Glu Val His Lys Phe Leu Gly His Ile Lys Arg  
 50 55 60  
 Pro Trp Gly Ile Phe Val Gly Phe Leu Cys Gln Phe Gly Ile Met Pro  
 65 70 75 80  
 Leu Thr Gly Phe Ile Leu Ser Val Ala Ser Gly Ile Leu Pro Val Gln  
 85 90 95

Ala Val Val Val Leu Ile Met Gly Cys Cys Pro Gly Gly Thr Gly Ser  
 100 105 110  
 Asn Ile Leu Ala Tyr Trp Ile Asp Gly Asp Met Asp Leu Ser Val Ser  
 115 120 125  
 Met Thr Thr Cys Ser Thr Leu Leu Ala Leu Gly Met Met Pro Leu Cys  
 130 135 140  
 Leu Phe Val Tyr Thr Lys Met Trp Val Asp Ser Gly Thr Ile Val Ile  
 145 150 155 160  
 Pro Tyr Asp Ser Ile Gly Ile Ser Leu Val Ala Leu Val Ile Pro Val  
 165 170 175  
 Ser Phe Gly Met Phe Val Asn His Lys Trp Pro Gln Lys Ala Lys Ile  
 180 185 190  
 Ile Leu Lys Ile Gly Ser Ile Thr Gly Val Ile Leu Ile Val Leu Ile  
 195 200 205  
 Ala Val Ile Gly Gly Ile Leu Tyr Gln Ser Ala Trp Ile Ile Glu Pro  
 210 215 220  
 Lys Leu Trp Ile Ile Gly Thr Ile Phe Pro Ile Ala Gly Tyr Ser Leu  
 225 230 235 240  
 Gly Phe Phe Leu Ala Arg Leu Ala Gly Gln Pro Trp Tyr Arg Cys Arg  
 245 250 255  
 Thr Val Ala Leu Glu Thr Gly Met Gln Asn Thr Gln Leu Cys Ser Thr  
 260 265 270  
 Ile Val Gln Leu Ser Phe Ser Pro Glu Asp Leu Asn Leu Val Phe Thr  
 275 280 285  
 Phe Pro Leu Ile Tyr Thr Val Phe Gln Leu Val Phe Ala Ala Val Ile  
 290 295 300  
 Leu Gly Ile Tyr Val Thr Tyr Arg Lys Cys Tyr Gly Lys Asn Asp Ala  
 305 310 315 320  
 Glu Phe Leu Glu Lys Thr Asp Asn Glu Met Asp Ser Arg Pro Ser Phe  
 325 330 335  
 Asp Glu Thr Asn Lys Gly Phe Gln Pro Asp Glu Lys  
 340 345

<210> 44

<211> 348

<212> PRT

<213> Mus musculus

<400> 44

Met Asp Asn Ser Ser Val Cys Pro Pro Asn Ala Thr Val Cys Glu Gly

1	5	10	15
Asp Ser Cys Val Val Pro Glu Ser Asn Phe Asn Ala Ile Leu Asn Thr	20	25	30
Val Met Ser Thr Val Leu Thr Ile Leu Leu Ala Met Val Met Phe Ser	35	40	45
Met Gly Cys Asn Val Glu Val His Lys Phe Leu Gly His Ile Lys Arg	50	55	60
Pro Trp Gly Ile Phe Val Gly Phe Leu Cys Gln Phe Gly Ile Met Pro	65	70	75
Leu Thr Gly Phe Ile Leu Ser Val Ala Ser Gly Ile Leu Pro Val Gln	85	90	95
Ala Val Val Val Leu Ile Met Gly Cys Cys Pro Gly Gly Thr Gly Ser	100	105	110
Asn Ile Leu Ala Tyr Trp Ile Asp Gly Asp Met Asp Leu Ser Val Ser	115	120	125
Met Thr Thr Cys Ser Thr Leu Leu Ala Leu Gly Met Met Pro Leu Cys	130	135	140
Leu Phe Val Tyr Thr Lys Met Trp Val Asp Ser Gly Thr Ile Val Ile	145	150	155
Pro Tyr Asp Ser Ile Gly Ile Ser Leu Val Ala Leu Val Ile Pro Val	165	170	175
Ser Phe Gly Met Phe Val Asn His Lys Trp Pro Gln Lys Ala Lys Ile	180	185	190
Ile Leu Lys Ile Gly Ser Ile Thr Gly Val Ile Leu Ile Val Leu Ile	195	200	205
Ala Val Ile Gly Gly Ile Leu Tyr Gln Ser Ala Trp Ile Ile Glu Pro	210	215	220
Lys Leu Trp Ile Ile Gly Thr Ile Phe Pro Ile Ala Gly Tyr Ser Leu	225	230	235
Gly Phe Phe Leu Ala Arg Leu Ala Gly Gln Pro Trp Tyr Arg Cys Arg	245	250	255
Thr Val Ala Leu Glu Thr Gly Met Gln Asn Thr Gln Leu Cys Ser Thr	260	265	270
Ile Val Gln Leu Ser Phe Ser Pro Glu Asp Leu Asn Leu Val Phe Thr	275	280	285
Phe Pro Leu Ile Tyr Thr Val Phe Gln Leu Val Phe Ala Ala Val Ile	290	295	300
Leu Gly Ile Tyr Val Thr Tyr Arg Lys Cys Tyr Gly Lys Asn Asp Ala			

305                      310                      315                      320  
 Glu Phe Leu Glu Lys Thr Asp Asn Glu Met Asp Ser Arg Pro Ser Phe  
                                  325                      330                      335  
 Asp Glu Thr Asn Lys Gly Phe Gln Pro Asp Glu Lys  
                                  340                      345  
  
 <210> 45  
 <211> 348  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 45  
 Met Asp Asn Ser Ser Ile Cys Asn Pro Asn Ala Thr Ile Cys Glu Gly  
   1                                 5                                 10                                 15  
 Asp Ser Cys Ile Ala Pro Glu Ser Asn Phe Asn Ala Ile Leu Ser Val  
                                  20                                 25                                 30  
 Val Met Ser Thr Val Leu Thr Ile Leu Leu Ala Leu Val Met Phe Ser  
                                  35                                 40                                 45  
 Met Gly Cys Asn Val Glu Leu His Lys Phe Leu Gly His Leu Arg Arg  
                                  50                                 55                                 60  
 Pro Trp Gly Ile Val Val Gly Phe Leu Cys Gln Phe Gly Ile Met Pro  
   65                                 70                                 75                                 80  
 Leu Thr Gly Phe Val Leu Ser Val Ala Phe Gly Ile Leu Pro Val Gln  
                                  85                                 90                                 95  
 Ala Val Val Val Leu Ile Gln Gly Cys Cys Pro Gly Gly Thr Ala Ser  
                                  100                                 105                                 110  
 Asn Ile Leu Ala Tyr Trp Val Asp Gly Asp Met Asp Leu Ser Val Ser  
                                  115                                 120                                 125  
 Met Thr Thr Cys Ser Thr Leu Leu Ala Leu Gly Met Met Pro Leu Cys  
   130                                 135                                 140  
 Leu Phe Ile Tyr Thr Lys Met Trp Val Asp Ser Gly Thr Ile Val Ile  
   145                                 150                                 155                                 160  
 Pro Tyr Asp Ser Ile Gly Thr Ser Leu Val Ala Leu Val Ile Pro Val  
                                  165                                 170                                 175  
 Ser Ile Gly Met Tyr Val Asn His Lys Trp Pro Gln Lys Ala Lys Ile  
                                  180                                 185                                 190  
 Ile Leu Lys Ile Gly Ser Ile Ala Gly Ala Ile Leu Ile Val Leu Ile  
                                  195                                 200                                 205  
 Ala Val Val Gly Gly Ile Leu Tyr Gln Ser Ala Trp Thr Ile Glu Pro  
   210                                 215                                 220

Lys Leu Trp Ile Ile Gly Thr Ile Tyr Pro Ile Ala Gly Tyr Gly Leu  
 225 230 235 240  
 Gly Phe Phe Leu Ala Arg Ile Ala Gly Gln Pro Trp Tyr Arg Cys Arg  
 245 250 255  
 Thr Val Ala Leu Glu Thr Gly Leu Gln Asn Thr Gln Leu Cys Ser Thr  
 260 265 270  
 Ile Val Gln Leu Ser Phe Ser Pro Glu Asp Leu Asn Leu Val Phe Thr  
 275 280 285  
 Phe Pro Leu Ile Tyr Ser Ile Phe Gln Ile Ala Phe Ala Ala Ile Leu  
 290 295 300  
 Leu Gly Ala Tyr Val Ala Tyr Lys Lys Cys His Gly Lys Asn Asn Thr  
 305 310 315 320  
 Glu Leu Gln Glu Lys Thr Asp Asn Glu Met Glu Pro Arg Ser Ser Phe  
 325 330 335  
 Gln Glu Thr Asn Lys Gly Phe Gln Pro Asp Glu Lys  
 340 345

<210> 46  
 <211> 272  
 <212> PRT  
 <213> Homo sapiens

<400> 46  
 Met Ala Ala Lys Val Phe Glu Ser Ile Gly Lys Phe Gly Leu Ala Leu  
 1 5 10 15  
 Ala Val Ala Gly Gly Val Val Asn Ser Ala Leu Tyr Asn Val Asp Ala  
 20 25 30  
 Gly His Arg Ala Val Ile Phe Asp Arg Phe Arg Gly Val Gln Asp Ile  
 35 40 45  
 Val Val Gly Glu Gly Thr His Phe Leu Ile Pro Trp Val Gln Lys Pro  
 50 55 60  
 Ile Ile Phe Asp Cys Arg Ser Arg Pro Arg Asn Val Pro Val Ile Thr  
 65 70 75 80  
 Gly Ser Lys Asp Leu Gln Asn Val Asn Ile Thr Leu Arg Ile Leu Phe  
 85 90 95  
 Arg Pro Val Ala Ser Gln Leu Pro Arg Ile Phe Thr Ser Ile Gly Glu  
 100 105 110  
 Asp Tyr Asp Glu Arg Val Leu Pro Ser Ile Thr Thr Glu Ile Leu Lys  
 115 120 125  
 Ser Val Val Ala Arg Phe Asp Ala Gly Glu Leu Ile Thr Gln Arg Glu  
 130 135 140

Leu Val Ser Arg Gln Val Ser Asp Asp Leu Thr Glu Arg Ala Ala Thr  
 145 150 155 160  
 Phe Gly Leu Ile Leu Asp Asp Val Ser Leu Thr His Leu Thr Phe Gly  
 165 170 175  
 Lys Glu Phe Thr Glu Ala Val Glu Ala Lys Gln Val Ala Gln Gln Glu  
 180 185 190  
 Ala Glu Arg Ala Arg Phe Val Val Glu Lys Ala Glu Gln Gln Lys Lys  
 195 200 205  
 Ala Ala Ile Ile Ser Ala Glu Gly Asp Ser Lys Ala Ala Glu Leu Ile  
 210 215 220  
 Ala Asn Ser Leu Ala Thr Ala Gly Asp Gly Leu Ile Glu Leu Arg Lys  
 225 230 235 240  
 Leu Glu Ala Ala Glu Asp Ile Ala Tyr Gln Leu Ser Arg Ser Arg Asn  
 245 250 255  
 Ile Thr Tyr Leu Pro Ala Gly Gln Ser Val Leu Leu Gln Leu Pro Gln  
 260 265 270

<210> 47  
 <211> 272  
 <212> PRT  
 <213> Rattus norvegicus

<400> 47  
 Met Ala Ala Lys Val Phe Glu Ser Ile Gly Lys Phe Gly Leu Ala Leu  
 1 5 10 15  
 Ala Val Ala Gly Gly Val Val Asn Ser Ala Leu Tyr Asn Val Asp Ala  
 20 25 30  
 Gly His Arg Ala Val Ile Phe Asp Arg Phe Arg Gly Val Gln Asp Ile  
 35 40 45  
 Val Val Gly Glu Gly Thr His Phe Leu Ile Pro Trp Val Gln Lys Pro  
 50 55 60  
 Ile Ile Phe Asp Cys Arg Ser Arg Pro Arg Asn Val Pro Val Ile Thr  
 65 70 75 80  
 Gly Ser Lys Asp Leu Gln Asn Val Asn Ile Thr Leu Arg Ile Leu Phe  
 85 90 95  
 Arg Pro Val Ala Ser Gln Leu Pro Arg Ile Tyr Thr Ser Ile Gly Glu  
 100 105 110  
 Asp Tyr Asp Glu Arg Val Leu Pro Ser Ile Thr Thr Glu Ile Leu Lys

115					120					125					
Ser	Val	Val	Ala	Arg	Phe	Asp	Ala	Gly	Glu	Leu	Ile	Thr	Gln	Arg	Glu
130						135					140				
Leu	Val	Ser	Arg	Gln	Val	Ser	Asp	Asp	Leu	Thr	Glu	Arg	Ala	Ala	Thr
145					150					155					160
Phe	Gly	Leu	Ile	Leu	Asp	Asp	Val	Ser	Leu	Thr	His	Leu	Thr	Phe	Gly
				165					170					175	
Lys	Glu	Phe	Thr	Glu	Ala	Val	Glu	Ala	Lys	Gln	Val	Ala	Gln	Gln	Glu
			180					185					190		
Ala	Glu	Arg	Ala	Arg	Phe	Val	Val	Glu	Lys	Ala	Glu	Gln	Gln	Lys	Lys
		195					200					205			
Ala	Ala	Ile	Ile	Ser	Ala	Glu	Gly	Asp	Ser	Lys	Ala	Ala	Glu	Leu	Ile
	210					215					220				
Ala	Asn	Ser	Leu	Ala	Thr	Ala	Gly	Asp	Gly	Leu	Ile	Glu	Leu	Arg	Lys
225					230					235					240
Leu	Glu	Ala	Ala	Glu	Asp	Ile	Ala	Tyr	Gln	Leu	Ser	Arg	Ser	Arg	Asn
			245						250					255	
Ile	Thr	Tyr	Leu	Pro	Ala	Gly	Gln	Ser	Val	Leu	Leu	Gln	Leu	Pro	Gln
			260					265					270		

<210> 48  
 <211> 1798  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 48  
 Met Glu Met Arg Glu Val Leu Ser Arg Glu Gly Arg Glu Ala Lys Asn  
 1 5 10 15  
 Leu Leu Val Tyr Gln Phe Cys Asp Glu Thr Thr Ser Ser Gly Ala Thr  
 20 25 30  
 Ser Gly Phe Gly Ser Thr Gly Gly Asp Val Gly Gly Gly Ser Gly Gly  
 35 40 45  
 Asp Gly Pro Ala Val Gly Ser Gly Gly Val Leu Leu Asn Gly Asp Cys  
 50 55 60  
 Tyr Arg Lys Pro Pro Met Val Pro Pro Lys Ser Pro Asn Gly Thr Pro  
 65 70 75 80  
 Lys Asn Cys Gln Ser Pro Thr Ser Pro Arg Leu Lys Ser Ser Ala Ser  
 85 90 95

Val Gly Cys Gly Gly Gly Ser Ser Gly Gly Pro Arg Val Arg Ser Ala	100	105	110
Ser Thr Gly Arg Asp Lys Lys Ser Glu Leu Gln Ala Arg Tyr Trp Ala	115	120	125
Leu Leu Phe Gly Asn Leu Gln Arg Ala Ile Asn Glu Ile Tyr Gln Thr	130	135	140
Val Glu Cys Tyr Glu Asn Ile Ser Ser Cys Gln Glu Thr Ile Leu Val	145	150	155
Leu Glu Asn Tyr Val Arg Asp Phe Lys Ala Leu Cys Glu Trp Phe Lys	165	170	175
Val Ser Trp Asp Tyr Glu Ser Arg Pro Leu Gln Gln Arg Pro Gln Ser	180	185	190
Leu Ala Trp Glu Val Arg Lys Ser Asn Pro Thr Pro Arg Val Arg Thr	195	200	205
Arg Ser Leu Cys Ser Pro Asn Asn Ser Gly Lys Ser Ser Pro Ala Leu	210	215	220
Phe Pro Gly Thr Gln Ser Gly Glu Thr Ser Pro Phe Cys Asp Asn Gly	225	230	235
Gln Ile Ser Pro Arg Lys Leu Leu Arg Ala Tyr Asp Gln Val Pro Lys	245	250	255
Gly Ala Met Arg Leu Asn Val Arg Glu Leu Phe Ala Ala Ser Lys Arg	260	265	270
Ala Thr Gln Gly Ser Ser Gln Ser Asp Asn Met Glu Gly Pro Leu Asp	275	280	285
Leu Ser Gly Asp Lys Ser Asn Phe Val Leu Arg Ser Thr Gln Tyr Ala	290	295	300
Gln Thr Asp Leu Glu Asp Pro His Leu Thr Leu Ala Asp Val Arg Glu	305	310	315
Lys Met Arg Met Glu Ala Glu Glu Arg Glu Ala Gln Asn Arg Ile Glu	325	330	335
Asn Glu Ala Leu Glu Glu Val Thr Ile Pro Ile Asp Asn Glu Asp Ala	340	345	350
Thr Glu Ser Leu Asn Lys Gln Glu Pro Ser Ser Leu Glu Leu Pro Ile	355	360	365
His Asn Val Ala Asp Leu Ser Lys Glu Pro Glu Leu Met Glu Ala Ala	370	375	380
Ser Glu Ala Thr Ala Leu Glu Met Thr Val Ala Ser Leu Glu Ser Met	385	390	395
			400



Glu Asn Ala Leu Leu Asn Gln Gln Ala Asn Lys Glu Pro Thr Pro Pro  
 405 410 415  
 Ser Thr Val Ile Lys Pro Leu Ala Glu Ile Leu Lys Lys Pro Gln Pro  
 420 425 430  
 Leu Asn Pro Leu Ser Gly Asn Asn Val Gln Asn Ser Pro Leu Lys Tyr  
 435 440 445  
 Ser Ser Val Leu Asn Arg Pro Ser Lys Lys Met Ile Pro Pro Pro Gly  
 450 455 460  
 Gly Val Ala Ala Gln Lys Thr Ile Ser Thr Lys Pro Gly Leu Val Lys  
 465 470 475 480  
 Pro Asn Leu Thr Thr Thr Val Asn Gly Leu Arg Ser Thr Lys Thr Ala  
 485 490 495  
 Thr Ala Pro Pro Ala Ile Lys Thr Thr Gly Arg Ser Gly Leu Gln Arg  
 500 505 510  
 His Pro Arg Pro Ser Ser Lys Thr Glu Cys Tyr Gly Pro Pro Asn Asn  
 515 520 525  
 Val Ala Ser Arg Leu Ser Ala Arg Ser Arg Thr Ile Asn Thr Leu Lys  
 530 535 540  
 Ala Glu Asn Gln His Ser Glu Pro Lys Gln Ile Gln Pro Pro Thr Asp  
 545 550 555 560  
 Ala Asp Asp Gly Trp Leu Thr Val Lys Asn Arg Arg Arg Thr Ser Met  
 565 570 575  
 His Trp Ala Asn Arg Phe Asn Gln Pro Thr Gly Tyr Ala Ser Leu Pro  
 580 585 590  
 Thr Leu Ala Leu Leu Asn Glu Gln Gln Lys Glu Gln Glu His Lys Glu  
 595 600 605  
 Lys Gln Lys Gly Glu Asp Asp Gly Lys Val Ile Val Lys Thr Ile Ser  
 610 615 620  
 Ala Lys Thr Lys Ala Pro Ile Glu Val Ala Lys Ala Lys Ala Lys Thr  
 625 630 635 640  
 Ser Ile Val Ile Thr Arg Pro Glu Ile Lys Asn Ala Lys Ala Lys Val  
 645 650 655  
 Asn Ser Phe Pro Val Gln Lys Ser Asn Thr Asn Gln Val Lys Lys Pro  
 660 665 670  
 Glu Lys Gln Glu Lys Ser Asp Thr Thr Ala Pro Ala Ala Ile Ala Ser  
 675 680 685  
 Ser Arg Leu Lys Met Thr Ser Leu His Lys Glu Tyr Met Arg Ser Glu  
 690 695 700

Lys Asn Ala Leu Arg Lys Leu Gln Gln Lys Glu Gln Gly Asn Gln Gln  
 705 710 715 720  
 His Asn Ser Ser Ser Ser Ser Ala Glu Thr Val Val Glu Ser Cys Asn  
 725 730 735  
 Glu Asp His Ser Lys Ile Asp Ile Lys Ile Gln Thr Asn Cys Glu Phe  
 740 745 750  
 Ser Lys Thr Ile Gly Glu Leu Tyr Glu Ser Ile Ala His Cys Lys Leu  
 755 760 765  
 Pro Ser Gly Ser Leu Lys Thr Asn Ala Ser Thr Leu Ser Ala Cys Asp  
 770 775 780  
 Glu Asn Glu Glu Gln Asn Thr Asp Asp Asn Glu Glu Glu Arg Asn Glu  
 785 790 795 800  
 Arg Ile Leu Gly Glu Val Gln Glu Ser Leu Glu Arg Gln Ile Arg Glu  
 805 810 815  
 Leu Glu Gln Thr Glu Ile Asp Val Asp Thr Glu Thr Asp Glu Thr Asp  
 820 825 830  
 Cys Glu Val Gln Leu Glu Glu Gln Asp Asp Gly Val Asp Gly Leu Glu  
 835 840 845  
 Met Gly Ser Gly Asp Asp Ser Ala Val Phe Val Thr Met Ser Asp Asp  
 850 855 860  
 Glu Asn Ala Ser Leu Glu Leu Arg Tyr Gln Ala Leu Leu Ser Asp Met  
 865 870 875 880  
 Ser Trp Asn Glu Arg Ala Glu Ala Leu Ala Thr Leu Gln Ala Tyr Val  
 885 890 895  
 Ala Arg His Pro Gly Arg Ala Gln Glu Leu His Gln Lys Leu Ser Ser  
 900 905 910  
 Pro Ser Arg Arg Arg Ser Leu Gln Glu Thr Leu Lys Lys Tyr Gln Ala  
 915 920 925  
 Lys Gln Ala Arg Ala Gln Gln Lys Arg Asn Leu Leu Gln Gln Glu Lys  
 930 935 940  
 Ala Ala Lys Leu Gln Gln Leu Phe Ser Arg Val Glu Asp Val Lys Ala  
 945 950 955 960  
 Ala Lys Asn Gln Ile Ile Glu Asp Lys Arg Gln Lys Met Gln Gly Arg  
 965 970 975  
 Leu Gln Arg Ala Ala Glu Asn Arg Glu Gln Tyr Leu Lys Gln Ile Ile  
 980 985 990  
 Glu Lys Ala His Asp Glu Glu Lys Lys Leu Lys Glu Ile Asn Phe Ile  
 995 1000 1005

Lys Asn Ile Glu Ala Gln Asn Lys Arg Leu Asp Leu Leu Glu Ser Ser  
 1010 1015 1020  
 Lys Glu Thr Glu Gly Arg Leu Gln Asp Leu Glu Gln Glu Arg Gln Lys  
 1025 1030 1035 1040  
 Arg Val Glu Glu Lys Leu Ala Lys Glu Ala Ala Val Glu Arg Arg Arg  
 1045 1050 1055  
 Gln Ala Leu Glu Lys Glu Arg Leu Leu Lys Leu Glu Lys Met Asn Glu  
 1060 1065 1070  
 Thr Arg Leu Glu Lys Glu Gln Arg Ile Gly Lys Met Gln Glu Gln Lys  
 1075 1080 1085  
 Glu Lys Gln Arg Gln Ala Leu Ala Arg Glu Lys Ala Arg Asp Arg Glu  
 1090 1095 1100  
 Glu Arg Leu Leu Ala Leu Gln Val Gln Gln Gln Gln Thr Thr Glu Glu  
 1105 1110 1115 1120  
 Leu Gln Arg Lys Ile Leu Gln Lys Gln Met Glu Ser Ala Arg Arg His  
 1125 1130 1135  
 Glu Glu Asn Ile Glu His Ile Arg Gln Arg Ala Leu Glu Leu Thr Ile  
 1140 1145 1150  
 Pro Thr Arg Gln Ala Asp Glu Gly Arg Gly Asp Gln Asp Val Ser Glu  
 1155 1160 1165  
 Asp Ile Leu Asn Gly Asn Ala Thr Ser Thr Thr Asn Glu Asp Cys Asp  
 1170 1175 1180  
 Leu Ser Ser Ser Leu Ser Glu Val Gly Gly Asn Asn Ala His Thr Arg  
 1185 1190 1195 1200  
 Ser Tyr Lys Lys Lys Met Lys Lys Leu Lys Gln Arg Met Asn Gln Cys  
 1205 1210 1215  
 Ala Ala Glu Tyr Leu Glu Ser Leu Glu Ala Leu Pro Ala His Ala Arg  
 1220 1225 1230  
 Arg Asp Ser Thr Val Pro Lys Leu Leu Asn Leu Val Val Lys Gly Gly  
 1235 1240 1245  
 Gly Ala Gln Gly Leu Asp Arg Asn Leu Gly Asn Leu Leu Arg Val Ile  
 1250 1255 1260  
 Pro Lys Ala Gln Thr Leu Asp Phe Leu Ala Phe Leu Cys Met Asp Gly  
 1265 1270 1275 1280  
 Leu Gly Ile Leu Ala Asn His Val Ile Ser Lys Gly Met Asp Glu Asn  
 1285 1290 1295  
 Ser Glu Ile Ser Arg Lys Ser Val Tyr Leu Ala Ala Gln Leu Tyr Arg  
 1300 1305 1310

Asn Ala Cys Ser Val Cys Pro Gln Ile Ala Arg His Ala Leu Leu Gly  
 1315 1320 1325  
 Asn Ser Ile Thr Val Leu Phe Asp Ala Ile Asn Lys Ser Phe Gln Val  
 1330 1335 1340  
 Ile Leu Lys Ser Asn Arg Cys Thr Lys Glu Thr Phe Ser Asn Phe Trp  
 1345 1350 1355 1360  
 Pro Pro Lys Met Leu His Asn Lys Ser Val Ala Arg Gln Ser Ser Arg  
 1365 1370 1375  
 Leu Glu Ala Leu Ser Leu Pro Glu Glu Lys Ser Pro Gln His Pro Val  
 1380 1385 1390  
 Glu Leu Ser Thr Glu Leu Met Leu Ala Cys Thr Glu Ala Leu Ser Ser  
 1395 1400 1405  
 Ser Tyr Val Lys Lys Asn Thr His Pro Lys Val Pro Glu Arg Leu Pro  
 1410 1415 1420  
 Asp Met Ile Asn Asp Cys Arg Phe His Trp Gln Asp Val Asn Lys Glu  
 1425 1430 1435 1440  
 Asp Met Leu Ala Asp Glu Phe Arg Lys Tyr Lys Cys Tyr Glu Lys Asn  
 1445 1450 1455  
 Pro Val Ile Ala Leu Pro His Pro Ser Leu Ser Ala Ser Leu Cys Arg  
 1460 1465 1470  
 Ser Leu Ser Ala Thr Pro Leu Lys Ile Asn Leu His Gln Phe Leu Gly  
 1475 1480 1485  
 Ser Gly Ile Leu Ile Leu Arg Leu Asn His His Arg His Pro Ala Thr  
 1490 1495 1500  
 Gly Ala Ser Phe Ser Asp Ser Cys Cys Thr Cys Cys Pro Lys Leu Thr  
 1505 1510 1515 1520  
 Thr Glu Ala Ala Val Ala Ala Val Ala Ala His Gln His Gln His Gln  
 1525 1530 1535  
 Asn Gln Gln Gln Gln Pro Asp Tyr Ala Val Ile Thr Gly Leu Ile Glu  
 1540 1545 1550  
 Ile Leu Ser Arg Arg Ile Gln Lys Val Arg Glu Ser Ile Glu Ser Asn  
 1555 1560 1565  
 Lys Ser Val Met Leu Ser Leu Leu Thr Thr Leu Gly Phe Leu Ser Arg  
 1570 1575 1580  
 Phe Ile Asp Val Cys Gln Pro Gly Pro Ala Asp Pro Thr Arg Leu Leu  
 1585 1590 1595 1600  
 Ser Ala Ala Lys Ser Thr Glu Leu Phe Gly Thr Val Ser Met Leu Tyr  
 1605 1610 1615

Gly Cys Val Met Pro Met Gly Glu Cys Ile Pro Pro Arg Thr Thr Ala  
 1620 1625 1630  
 Leu Ala Ala Ser Thr Phe His Leu Tyr Val Ser Leu Ala Ser Leu Asp  
 1635 1640 1645  
 Val Asn Thr Phe Gln Glu Thr Leu Thr Val Glu Gly Pro Leu Ser Leu  
 1650 1655 1660  
 Lys Leu Leu Asp Val Met Thr Val Ile Leu Asn Cys Ser Leu Val Asn  
 1665 1670 1675 1680  
 Asp Gln Trp Thr Thr Asn Ser Glu Ser Cys Pro Met Leu Ile Asp Leu  
 1685 1690 1695  
 Val Ala Ser Met Ala Phe Phe Cys Val Asn Asn Arg Arg His Gln Asp  
 1700 1705 1710  
 Leu Leu Ile Ser Glu Gln Tyr Ala Val Ile Phe Lys Arg Met Ala Lys  
 1715 1720 1725  
 Leu Pro Thr Gln Phe Asn Pro Val Ile Tyr Pro Phe Leu Val Thr Val  
 1730 1735 1740  
 Ser Phe Asn Asn Pro Pro Ala Arg Glu Phe Leu Ser Lys Asp Phe Asp  
 1745 1750 1755 1760  
 Leu Thr Phe Leu Asp Glu Tyr Ser Lys Ser Glu Met Ala Gln Arg Asn  
 1765 1770 1775  
 Val Val Ile Lys Leu Ile Asn Ser Arg Thr Lys Asp Lys Ile Ser Ala  
 1780 1785 1790  
 Gly Asn Lys Lys Asn Ala  
 1795

<210> 49  
 <211> 274  
 <212> PRT  
 <213> Toxocara canis

<400> 49  
 Met Ala Gly Ala Gln Lys Leu Leu Gly Arg Leu Gly Gln Ile Gly Val  
 1 5 10 15  
 Ala Leu Ala Val Thr Gly Gly Val Val Gln Ser Ala Leu Tyr Asn Val  
 20 25 30  
 Asp Gly Gly Gln Arg Ala Val Ile Phe Asp Arg Phe Thr Gly Val Lys  
 35 40 45  
 Pro Asp Val Val Gly Glu Gly Thr His Phe Leu Ile Pro Trp Val Gln  
 50 55 60  
 Arg Pro Ile Ile Phe Asp Ile Arg Ser Thr Pro Arg Ala Ile Ser Thr  
 65 70 75 80

Ile Thr Gly Ser Lys Asp Leu Gln Asn Val Ser Ile Thr Leu Arg Ile  
                             85                            90                            95  
 Leu His Arg Pro Glu Pro Ser Lys Leu Pro Asn Ile Tyr Leu Asn Ile  
                             100                            105                            110  
 Gly Gln Asp Tyr Ala Glu Arg Val Leu Pro Ser Ile Thr Asn Glu Val  
                             115                            120                            125  
 Leu Lys Ala Val Val Ala Gln Phe Asp Ala His Glu Met Ile Thr Gln  
                             130                            135                            140  
 Arg Glu Ser Val Ser His Arg Val Ser Val Glu Leu Ser Glu Arg Ala  
                             145                            150                            155                            160  
 Arg Gln Phe Gly Ile Leu Leu Asp Asp Ile Ala Ile Thr His Leu Ser  
                             165                            170                            175  
 Phe Gly Arg Glu Phe Thr Glu Ala Val Glu Met Lys Gln Val Ala Gln  
                             180                            185                            190  
 Gln Glu Ala Glu Lys Ala Arg Tyr Leu Val Glu Thr Ala Glu Gln Met  
                             195                            200                            205  
 Lys Ile Ala Ala Ile Thr Thr Ala Glu Gly Asp Ala Gln Ala Ala Lys  
                             210                            215                            220  
 Leu Leu Ala Gln Ala Phe Lys Asp Ala Gly Asp Gly Leu Ile Glu Leu  
                             225                            230                            235                            240  
 Arg Lys Ile Glu Ala Ala Glu Glu Ile Ala Glu Arg Met Ser Lys Thr  
                             245                            250                            255  
 Arg Asn Val Ile Tyr Leu Pro Gly Asn Gln Asn Thr Leu Phe Asn Leu  
                             260                            265                            270  
 Pro Ala

<210> 50  
 <211> 402  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 50  
 Met Glu Lys Tyr Lys Asn Glu Leu Glu Ile Phe Lys Arg Met Tyr Phe  
   1                            5                            10                            15  
 Lys Asn Tyr Pro Thr Ser Ser Lys Asp Glu Glu Ala Ala Val Ile  
                             20                            25                            30  
 Gln Lys Gly Gly Glu Phe Ile Gln Glu Ile Leu Pro Thr Ile Ile Ser  
                             35                            40                            45  
 Thr Ser Arg Ala Tyr Asp Thr Asn Gln Lys Ala Leu Leu Leu Ala Glu

50					55					60					
Gly	Gly	Lys	Met	Tyr	Asn	Val	Leu	Glu	Asp	Tyr	Asn	Glu	Thr	Ala	Glu
65					70					75					80
Lys	Met	Leu	Ser	Lys	Ser	Val	Arg	Met	Asn	Pro	Lys	Asn	Ala	Asp	Ala
				85					90					95	
Trp	His	Glu	Leu	Gly	Leu	Cys	Val	Met	Lys	Arg	Arg	Asp	Leu	Glu	Phe
			100					105					110		
Ala	Gln	Ser	Cys	Phe	Lys	Ile	Ala	Leu	Gly	Ile	Ser	Lys	Thr	Ala	Pro
			115				120					125			
Ile	Leu	Thr	Ser	Leu	Ala	Val	Ala	Met	Arg	Leu	Val	Ala	Leu	Glu	His
	130					135					140				
Pro	Glu	Pro	Ala	Gln	Ala	Glu	Ile	Arg	Thr	Lys	Ala	Met	Glu	Leu	Ile
145				150						155					160
Ile	Glu	Ala	Arg	Arg	Leu	Asp	Ser	Ala	Tyr	Gly	Pro	Ala	Asn	Ile	Ala
				165					170					175	
Phe	Ala	Thr	Gly	Leu	Phe	Tyr	Cys	Phe	Phe	Ser	Thr	Ala	Lys	Val	Glu
			180					185					190		
Leu	Lys	Phe	Leu	Asp	Lys	Val	Ile	Glu	Asn	Tyr	Lys	Lys	Ala	Leu	Glu
		195					200					205			
Cys	Glu	Leu	Ser	Arg	Thr	Asp	Pro	Gln	Val	Tyr	Ile	Asn	Met	Ala	Thr
		210				215					220				
Cys	Leu	Lys	Phe	Met	Glu	Lys	Tyr	Asp	Glu	Ala	Leu	Ala	Val	Leu	Gln
225				230					235						240
Lys	Ala	Val	Glu	Tyr	Asp	Pro	Arg	Asn	Glu	Leu	Glu	Thr	Arg	Glu	Lys
				245					250					255	
Leu	Ala	Ser	Phe	Val	Ser	Tyr	Leu	Ser	Lys	Phe	Thr	Asp	Ala	Ile	Gln
			260					265					270		
Lys	Lys	Gly	Lys	Met	Lys	Ala	Lys	Arg	Met	Gln	Glu	Met	Ile	Asn	Glu
		275					280					285			
Leu	Lys	Lys	Ser	Ser	Asp	Gly	Phe	Arg	Ala	Lys	Ile	Ile	Gly	Asn	Ile
		290				295					300				
Gly	His	Asp	Glu	Thr	Ile	Pro	Val	Ala	Leu	Val	Gly	Val	Asp	Ala	Ala
305						310					315				320
Gly	Glu	Val	Tyr	Gly	Ile	Thr	Ile	Tyr	Asn	Cys	Leu	Ser	Asn	Phe	Gly
				325					330					335	
Phe	Val	Ile	Gly	Asp	Thr	Val	Thr	Ile	Ala	Lys	Pro	Asp	Phe	Arg	Glu
			340					345					350		
Ile	Lys	Asn	Leu	Thr	Ile	Pro	Ser	Asp	Pro	Glu	Ile	His	Val	Asp	Ser

355		360		365
Val Lys Trp Ile Arg Val Ala Thr Pro Thr Gln Met Lys Lys Asn Gly				
370		375		380
Val Pro Leu Pro Glu Ser Val Leu Ala Arg Ala Val Ala Ser Thr Gln				
385		390		400
Thr Lys				

<210> 51  
 <211> 711  
 <212> PRT  
 <213> Homo sapiens

<400> 51  
 Met Gly Trp Leu Pro Leu Leu Leu Leu Leu Thr Gln Cys Leu Gly Val  
 1 5 10 15  
 Pro Gly Gln Arg Ser Pro Leu Asn Asp Phe Gln Val Leu Arg Gly Thr  
 20 25 30  
 Glu Leu Gln His Leu Leu His Ala Val Val Pro Gly Pro Trp Gln Glu  
 35 40 45  
 Asp Val Ala Asp Ala Glu Glu Cys Ala Gly Arg Cys Gly Pro Leu Met  
 50 55 60  
 Asp Cys Arg Ala Phe His Tyr Asn Val Ser Ser His Gly Cys Gln Leu  
 65 70 75 80  
 Leu Pro Trp Thr Gln His Ser Pro His Thr Arg Leu Arg Arg Ser Gly  
 85 90 95  
 Arg Cys Asp Leu Phe Gln Lys Lys Asp Tyr Val Arg Thr Cys Ile Met  
 100 105 110  
 Asn Asn Gly Val Gly Tyr Arg Gly Thr Met Ala Thr Thr Val Gly Gly  
 115 120 125  
 Leu Pro Cys Gln Ala Trp Ser His Lys Phe Pro Asn Asp His Lys Tyr  
 130 135 140  
 Thr Pro Thr Leu Arg Asn Gly Leu Glu Glu Asn Phe Cys Arg Asn Pro  
 145 150 155 160  
 Asp Gly Asp Pro Gly Gly Pro Trp Cys Tyr Thr Thr Asp Pro Ala Val  
 165 170 175  
 Arg Phe Gln Ser Cys Gly Ile Lys Ser Cys Arg Glu Ala Ala Cys Val  
 180 185 190  
 Trp Cys Asn Gly Glu Glu Tyr Arg Gly Ala Val Asp Arg Thr Glu Ser  
 195 200 205





Lys Glu Gln Trp Ile Leu Thr Ala Arg Gln Cys Phe Ser Ser Cys His  
 515 520 525  
 Met Pro Leu Thr Gly Tyr Glu Val Trp Leu Gly Thr Leu Phe Gln Asn  
 530 535 540  
 Pro Gln His Gly Glu Pro Ser Leu Gln Arg Val Pro Val Ala Lys Met  
 545 550 555 560  
 Val Cys Gly Pro Ser Gly Ser Gln Leu Val Leu Leu Lys Leu Glu Arg  
 565 570 575  
 Ser Val Thr Leu Asn Gln Arg Val Ala Leu Ile Cys Leu Pro Pro Glu  
 580 585 590  
 Trp Tyr Val Val Pro Pro Gly Thr Lys Cys Glu Ile Ala Gly Trp Gly  
 595 600 605  
 Glu Thr Lys Gly Thr Gly Asn Asp Thr Val Leu Asn Val Ala Leu Leu  
 610 615 620  
 Asn Val Ile Ser Asn Gln Glu Cys Asn Ile Lys His Arg Gly Arg Val  
 625 630 635 640  
 Arg Glu Ser Glu Met Cys Thr Glu Gly Leu Leu Ala Pro Val Gly Ala  
 645 650 655  
 Cys Glu Gly Asp Tyr Gly Gly Pro Leu Ala Cys Phe Thr His Asn Cys  
 660 665 670  
 Trp Val Leu Glu Gly Ile Ile Ile Pro Asn Arg Val Cys Ala Arg Ser  
 675 680 685  
 Arg Trp Pro Ala Val Phe Thr Arg Val Ser Val Phe Val Asp Trp Ile  
 690 695 700  
 His Lys Val Met Arg Leu Gly  
 705 710

<210> 52  
 <211> 711  
 <212> PRT  
 <213> Homo sapiens

<400> 52  
 Met Gly Trp Leu Pro Leu Leu Leu Leu Leu Thr Gln Cys Leu Gly Val  
 1 5 10 15  
 Pro Gly Gln Arg Ser Pro Leu Asn Asp Phe Gln Val Leu Arg Gly Thr  
 20 25 30  
 Glu Leu Gln His Leu Leu His Ala Val Val Pro Gly Pro Trp Gln Glu  
 35 40 45  
 Asp Val Ala Asp Ala Glu Glu Cys Ala Gly Arg Cys Gly Pro Leu Met  
 50 55 60

Asp	Cys	Arg	Ala	Phe	His	Tyr	Asn	Val	Ser	Ser	His	Gly	Cys	Gln	Leu	65	70	75	80
Leu	Pro	Trp	Thr	Gln	His	Ser	Pro	His	Thr	Arg	Leu	Arg	Arg	Ser	Gly	85	90	95	
Arg	Cys	Asp	Leu	Phe	Gln	Lys	Lys	Asp	Tyr	Val	Arg	Thr	Cys	Ile	Met	100	105	110	
Asn	Asn	Gly	Val	Gly	Tyr	Arg	Gly	Thr	Met	Ala	Thr	Thr	Val	Gly	Gly	115	120	125	
Leu	Pro	Cys	Gln	Ala	Trp	Ser	His	Lys	Phe	Pro	Asn	Asp	His	Lys	Tyr	130	135	140	
Thr	Pro	Thr	Leu	Arg	Asn	Gly	Leu	Glu	Glu	Asn	Phe	Cys	Arg	Asn	Pro	145	150	155	160
Asp	Gly	Asp	Pro	Gly	Gly	Pro	Trp	Cys	Tyr	Thr	Thr	Asp	Pro	Ala	Val	165	170	175	
Arg	Phe	Gln	Ser	Cys	Gly	Ile	Lys	Ser	Cys	Arg	Glu	Ala	Ala	Cys	Val	180	185	190	
Trp	Cys	Asn	Gly	Glu	Glu	Tyr	Arg	Gly	Ala	Val	Asp	Arg	Thr	Glu	Ser	195	200	205	
Gly	Arg	Glu	Cys	Gln	Arg	Trp	Asp	Leu	Gln	His	Pro	His	Gln	His	Pro	210	215	220	
Phe	Glu	Pro	Gly	Lys	Phe	Leu	Asp	Gln	Gly	Leu	Asp	Asp	Asn	Tyr	Cys	225	230	235	240
Arg	Asn	Pro	Asp	Gly	Ser	Glu	Arg	Pro	Trp	Cys	Tyr	Thr	Thr	Asp	Pro	245	250	255	
Gln	Ile	Glu	Arg	Glu	Phe	Cys	Asp	Leu	Pro	Arg	Cys	Gly	Ser	Glu	Ala	260	265	270	
Gln	Pro	Arg	Gln	Glu	Ala	Thr	Thr	Val	Ser	Cys	Phe	Arg	Gly	Lys	Gly	275	280	285	
Glu	Gly	Tyr	Arg	Gly	Thr	Ala	Asn	Thr	Thr	Thr	Ala	Gly	Val	Pro	Cys	290	295	300	
Gln	Arg	Trp	Asp	Ala	Gln	Ile	Pro	His	Gln	His	Arg	Phe	Thr	Pro	Glu	305	310	315	320
Lys	Tyr	Ala	Cys	Lys	Asp	Leu	Arg	Glu	Asn	Phe	Cys	Arg	Asn	Pro	Asp	325	330	335	
Gly	Ser	Glu	Ala	Pro	Trp	Cys	Phe	Thr	Leu	Arg	Pro	Gly	Met	Arg	Ala	340	345	350	
Ala	Phe	Cys	Tyr	Gln	Ile	Arg	Arg	Cys	Thr	Asp	Asp	Val	Arg	Pro	Gln	355	360	365	

Asp Cys Tyr His Gly Ala Gly Glu Gln Tyr Arg Gly Thr Val Ser Lys  
 370 375 380  
 Thr Arg Lys Gly Val Gln Cys Gln Arg Trp Ser Ala Glu Thr Pro His  
 385 390 395 400  
 Lys Pro Gln Phe Thr Phe Thr Ser Glu Pro His Ala Gln Leu Glu Glu  
 405 410 415  
 Asn Phe Cys Arg Asn Pro Asp Gly Asp Ser His Gly Pro Trp Cys Tyr  
 420 425 430  
 Thr Met Asp Pro Arg Thr Pro Phe Asp Tyr Cys Ala Leu Arg Arg Cys  
 435 440 445  
 Ala Asp Asp Gln Pro Pro Ser Ile Leu Asp Pro Pro Asp Gln Val Gln  
 450 455 460  
 Phe Glu Lys Cys Gly Lys Arg Val Asp Arg Leu Asp Gln Arg Arg Ser  
 465 470 475 480  
 Lys Leu Arg Val Val Gly Gly His Pro Gly Asn Ser Pro Trp Thr Val  
 485 490 495  
 Ser Leu Arg Asn Arg Gln Gly Gln His Phe Cys Gly Gly Ser Leu Val  
 500 505 510  
 Lys Glu Gln Trp Ile Leu Thr Ala Arg Gln Cys Phe Ser Ser Cys His  
 515 520 525  
 Met Pro Leu Thr Gly Tyr Glu Val Trp Leu Gly Thr Leu Phe Gln Asn  
 530 535 540  
 Pro Gln His Gly Glu Pro Ser Leu Gln Arg Val Pro Val Ala Lys Met  
 545 550 555 560  
 Val Cys Gly Pro Ser Gly Ser Gln Leu Val Leu Leu Lys Leu Glu Arg  
 565 570 575  
 Ser Val Thr Leu Asn Gln Arg Val Ala Leu Ile Cys Leu Pro Pro Glu  
 580 585 590  
 Trp Tyr Val Val Pro Pro Gly Thr Lys Cys Glu Ile Ala Gly Trp Gly  
 595 600 605  
 Glu Thr Lys Gly Thr Gly Asn Asp Thr Val Leu Asn Val Ala Phe Leu  
 610 615 620  
 Asn Val Ile Ser Asn Gln Glu Cys Asn Ile Lys His Arg Gly Arg Val  
 625 630 635 640  
 Arg Glu Ser Glu Met Cys Thr Glu Gly Leu Leu Ala Pro Val Gly Ala  
 645 650 655  
 Cys Glu Gly Asp Tyr Gly Gly Pro Leu Ala Cys Phe Thr His Asn Cys  
 660 665 670

Trp Val Leu Glu Gly Ile Ile Ile Pro Asn Arg Val Cys Ala Arg Ser  
675 680 685

Arg Trp Pro Ala Val Phe Thr Arg Val Ser Val Phe Val Asp Trp Ile  
690 695 700

His Lys Val Met Arg Leu Gly  
705 710

<210> 53

<211> 711

<212> PRT

<213> Homo sapiens

<400> 53

Met Gly Trp Leu Pro Leu Leu Leu Leu Leu Thr Gln Tyr Leu Gly Val  
1 5 10 15

Pro Gly Gln Arg Ser Pro Leu Asn Asp Phe Gln Val Leu Arg Gly Thr  
20 25 30

Glu Leu Gln His Leu Leu His Ala Val Val Pro Gly Pro Trp Gln Glu  
35 40 45

Asp Val Ala Asp Ala Glu Glu Cys Ala Gly Arg Cys Gly Pro Leu Met  
50 55 60

Asp Cys Arg Ala Phe His Tyr Asn Val Ser Ser His Gly Cys Gln Leu  
65 70 75 80

Leu Pro Trp Thr Gln His Ser Pro His Thr Arg Leu Arg Arg Ser Gly  
85 90 95

Arg Cys Asp Leu Phe Gln Lys Lys Asp Tyr Val Arg Thr Cys Ile Met  
100 105 110

Asn Asn Gly Val Gly Tyr Arg Gly Thr Met Ala Thr Thr Val Gly Gly  
115 120 125

Leu Pro Cys Gln Ala Trp Ser His Lys Phe Pro Asn Asp His Lys Tyr  
130 135 140

Thr Pro Thr Leu Arg Asn Gly Leu Glu Glu Asn Phe Cys Arg Asn Pro  
145 150 155 160

Asp Gly Asp Pro Gly Gly Pro Trp Cys Tyr Thr Thr Asp Pro Ala Val  
165 170 175

Arg Phe Gln Ser Cys Gly Ile Lys Ser Cys Arg Glu Ala Ala Cys Val  
180 185 190

Trp Cys Asn Gly Glu Glu Tyr Arg Gly Ala Val Asp Arg Thr Glu Ser  
195 200 205

Gly Arg Glu Cys Gln Arg Trp Asp Leu Gln His Pro His Gln His Pro

210	215	220
Phe Glu Pro Gly Lys	Phe Leu Asp Gln Gly	Leu Asp Asp Asn Tyr Cys
225	230	235 240
Arg Asn Pro Asp Gly	Ser Glu Arg Pro Trp Cys Tyr Thr Thr	Asp Pro
	245	250 255
Gln Ile Glu Arg Glu Phe Cys Asp Leu Pro Arg Cys Gly Ser Glu Ala		
	260	265 270
Gln Pro Arg Gln Glu Ala Thr Thr Val Ser Cys Phe Arg Gly Lys Gly		
	275	280 285
Glu Gly Tyr Arg Gly Thr Ala Asn Thr Thr Thr Ala Gly Val Pro Cys		
	290	295 300
Gln Arg Trp Asp Ala Gln Ile Pro His Gln His Arg Phe Thr Pro Glu		
305	310	315 320
Lys Tyr Ala Cys Lys Asp Leu Arg Glu Asn Phe Cys Arg Asn Pro Asp		
	325	330 335
Gly Ser Glu Ala Pro Trp Cys Phe Thr Leu Arg Pro Gly Met Arg Ala		
	340	345 350
Ala Phe Cys Tyr Gln Ile Arg Arg Cys Thr Asp Asp Val Arg Pro Gln		
	355	360 365
Asp Cys Tyr His Gly Ala Gly Glu Gln Tyr Arg Gly Thr Val Ser Lys		
	370	375 380
Thr Arg Lys Gly Val Gln Cys Gln Arg Trp Ser Ala Glu Thr Pro His		
385	390	395 400
Lys Pro Gln Phe Thr Phe Thr Ser Glu Pro His Ala Gln Leu Glu Glu		
	405	410 415
Asn Phe Cys Arg Asn Pro Asp Gly Asp Ser His Gly Pro Trp Cys Tyr		
	420	425 430
Thr Met Asp Pro Arg Thr Pro Phe Asp Tyr Cys Ala Leu Arg Arg Cys		
	435	440 445
Ala Asp Asp Gln Pro Pro Ser Ile Leu Asp Pro Pro Asp Gln Val Gln		
	450	455 460
Phe Glu Lys Cys Gly Lys Arg Val Asp Arg Leu Asp Gln Arg Arg Ser		
465	470	475 480
Lys Leu Arg Val Val Gly Gly His Pro Gly Asn Ser Pro Trp Thr Val		
	485	490 495
Ser Leu Arg Asn Arg Gln Gly Gln His Phe Cys Gly Gly Ser Leu Val		
	500	505 510
Lys Glu Gln Trp Ile Leu Thr Ala Arg Gln Cys Phe Ser Ser Cys His		

515					520					525					
Met	Pro	Leu	Thr	Gly	Tyr	Glu	Val	Trp	Leu	Gly	Thr	Leu	Phe	Gln	Asn
530						535					540				
Pro	Gln	His	Gly	Glu	Pro	Ser	Leu	Gln	Arg	Val	Pro	Val	Ala	Lys	Met
545					550					555					560
Val	Cys	Gly	Pro	Ser	Gly	Ser	Gln	Leu	Val	Leu	Leu	Lys	Leu	Glu	Arg
				565					570					575	
Ser	Val	Thr	Leu	Asn	Gln	Arg	Val	Ala	Leu	Ile	Cys	Leu	Pro	Pro	Glu
			580					585					590		
Trp	Tyr	Val	Val	Pro	Pro	Gly	Thr	Lys	Cys	Glu	Ile	Ala	Gly	Trp	Gly
		595					600					605			
Glu	Thr	Lys	Gly	Thr	Gly	Asn	Asp	Thr	Val	Leu	Asn	Val	Ala	Leu	Leu
	610					615					620				
Asn	Val	Ile	Ser	Asn	Gln	Glu	Cys	Asn	Ile	Lys	His	Arg	Gly	Arg	Val
625				630						635					640
Arg	Glu	Ser	Glu	Met	Cys	Thr	Glu	Gly	Leu	Leu	Ala	Pro	Val	Gly	Ala
				645					650					655	
Cys	Glu	Gly	Asp	Tyr	Gly	Gly	Pro	Leu	Ala	Cys	Phe	Thr	His	Asn	Cys
			660					665					670		
Trp	Val	Leu	Glu	Gly	Ile	Ile	Ile	Pro	Asn	Arg	Val	Cys	Ala	Arg	Ser
		675					680					685			
Arg	Trp	Pro	Ala	Val	Phe	Thr	Arg	Val	Ser	Val	Phe	Val	Asp	Trp	Ile
	690					695					700				
His	Lys	Val	Met	Arg	Leu	Gly									
705					710										

<210> 54  
 <211> 529  
 <212> PRT  
 <213> Homo sapiens

<400> 54  
 Met Asp Cys Arg Ala Phe His Tyr Asn Val Ser Ser His Gly Cys Gln  
 1 5 10 15  
 Leu Leu Pro Trp Thr Gln His Ser Pro His Thr Arg Leu Arg His Ser  
 20 25 30  
 Gly Arg Cys Asp Leu Phe Gln Glu Lys Asp Tyr Ile Arg Thr Cys Ile  
 35 40 45  
 Met Asn Asn Gly Val Gly Tyr Arg Gly Thr Met Ala Thr Thr Val Gly  
 50 55 60

Gly	Leu	Ser	Cys	Gln	Ala	Trp	Ser	His	Lys	Phe	Pro	Asn	Asp	His	Gln	65	70	75	80
Tyr	Met	Pro	Thr	Leu	Arg	Asn	Gly	Leu	Glu	Glu	Asn	Phe	Cys	Arg	Asn	85	90	95	
Pro	Asp	Gly	Asp	Pro	Gly	Gly	Pro	Trp	Cys	His	Thr	Thr	Asp	Pro	Ala	100	105	110	
Val	Arg	Phe	Gln	Ser	Cys	Gly	Ile	Lys	Ser	Cys	Arg	Val	Ala	Ala	Cys	115	120	125	
Val	Trp	Cys	Asn	Gly	Glu	Glu	Tyr	Arg	Gly	Ala	Val	Asp	Arg	Thr	Glu	130	135	140	
Ser	Gly	Arg	Glu	Cys	Gln	Arg	Trp	Asp	Leu	Gln	His	Pro	His	Gln	His	145	150	155	160
Pro	Phe	Glu	Pro	Gly	Lys	Phe	Leu	Asp	Gln	Gly	Leu	Asp	Asp	Asn	Tyr	165	170	175	
Cys	Arg	Asn	Pro	Asp	Gly	Ser	Glu	Arg	Pro	Trp	Cys	Tyr	Thr	Thr	Asp	180	185	190	
Pro	Gln	Ile	Glu	Arg	Glu	Phe	Cys	Asp	Leu	Pro	Arg	Cys	Gly	Ser	Glu	195	200	205	
Ala	Gln	Pro	Arg	Gln	Glu	Ala	Thr	Ser	Val	Ser	Cys	Phe	Arg	Gly	Lys	210	215	220	
Gly	Glu	Gly	Tyr	Arg	Gly	Thr	Ala	Asn	Thr	Thr	Thr	Ala	Gly	Val	Pro	225	230	235	240
Cys	Gln	Arg	Trp	Asp	Ala	Gln	Ile	Pro	His	Gln	His	Arg	Phe	Thr	Pro	245	250	255	
Glu	Lys	Tyr	Ala	Cys	Lys	Asp	Leu	Arg	Glu	Asn	Phe	Cys	Arg	Asn	Pro	260	265	270	
Asp	Gly	Ser	Glu	Ala	Pro	Trp	Cys	Phe	Thr	Leu	Arg	Pro	Gly	Met	Arg	275	280	285	
Val	Gly	Phe	Cys	Tyr	Gln	Ile	Arg	Arg	Cys	Thr	Asp	Asp	Val	Arg	Pro	290	295	300	
Gln	Asp	Cys	Tyr	His	Gly	Ala	Gly	Glu	Gln	Tyr	Arg	Gly	Thr	Val	Ser	305	310	315	320
Lys	Thr	Arg	Lys	Gly	Val	Gln	Cys	Gln	Arg	Gly	Ser	Ala	Glu	Thr	Pro	325	330	335	
His	Lys	Pro	Gln	Phe	Thr	Phe	Thr	Ser	Glu	Pro	His	Ala	Gln	Leu	Glu	340	345	350	
Glu	Asn	Phe	Cys	Gln	Thr	Gln	Met	Gly	Ile	Ala	Met	Gly	Pro	Gly	Ala	355	360	365	



Thr Arg Trp Thr Gln Gly Pro His Ser Thr Thr Val Pro Cys Asp Ala  
 370 375 380  
 Ala Leu Met Thr Ser Arg His Gln Ser Trp Thr Pro Gln Thr Arg Cys  
 385 390 395 400  
 Ser Leu Arg Ser Val Ala Arg Gly Trp Ile Gly Trp Ile Ser Val Val  
 405 410 415  
 Pro Ser Cys Ala Trp Leu Gly Ala Ile Arg Ala Thr His Pro Gly Gln  
 420 425 430  
 Ser Ala Cys Gly Ile Gly Gln Gly Gln His Phe Cys Gly Gly Ser Leu  
 435 440 445  
 Val Lys Glu Gln Trp Ile Leu Thr Ala Arg Gln Cys Phe Ser Ser Cys  
 450 455 460  
 His Met Pro Leu Thr Gly Tyr Glu Val Trp Leu Gly Thr Leu Phe Gln  
 465 470 475 480  
 Asn Pro Gln His Gly Glu Pro Gly Leu Gln Arg Val Pro Val Ala Lys  
 485 490 495  
 Met Leu Cys Gly Pro Ser Gly Ser Gln Leu Val Leu Leu Lys Leu Glu  
 500 505 510  
 Arg Ser Val Thr Leu Asn Gln Arg Val Ala Leu Ile Cys Leu Pro Pro  
 515 520 525

Glu

<210> 55  
 <211> 716  
 <212> PRT  
 <213> Mus musculus

<400> 55  
 Met Gly Trp Leu Pro Leu Leu Leu Leu Leu Val Gln Cys Ser Arg Ala  
 1 5 10 15  
 Leu Gly Gln Arg Ser Pro Leu Asn Asp Phe Gln Leu Phe Arg Gly Thr  
 20 25 30  
 Glu Leu Arg Asn Leu Leu His Thr Ala Val Pro Gly Pro Trp Gln Glu  
 35 40 45  
 Asp Val Ala Asp Ala Glu Glu Cys Ala Arg Arg Cys Gly Pro Leu Leu  
 50 55 60  
 Asp Cys Arg Ala Phe His Tyr Asn Met Ser Ser His Gly Cys Gln Leu  
 65 70 75 80  
 Leu Pro Trp Thr Gln His Ser Leu His Thr Gln Leu Tyr His Ser Ser  
 85 90 95

Leu	Cys	His	Leu	Phe	Gln	Lys	Lys	Asp	Tyr	Val	Arg	Thr	Cys	Ile	Met	
			100					105					110			
Asp	Asn	Gly	Val	Ser	Tyr	Arg	Gly	Thr	Val	Ala	Arg	Thr	Ala	Gly	Gly	
		115					120					125				
Leu	Pro	Cys	Gln	Ala	Trp	Ser	Arg	Arg	Phe	Pro	Asn	Asp	His	Lys	Tyr	
	130					135					140					
Thr	Pro	Thr	Pro	Lys	Asn	Gly	Leu	Glu	Glu	Asn	Phe	Cys	Arg	Asn	Pro	
145					150					155					160	
Asp	Gly	Asp	Pro	Arg	Gly	Pro	Trp	Cys	Tyr	Thr	Thr	Asn	Arg	Ser	Val	
				165					170					175		
Arg	Phe	Gln	Ser	Cys	Gly	Ile	Lys	Thr	Cys	Arg	Glu	Ala	Val	Cys	Val	
		180						185					190			
Leu	Cys	Asn	Gly	Glu	Asp	Tyr	Arg	Gly	Glu	Val	Asp	Val	Thr	Glu	Ser	
		195					200					205				
Gly	Arg	Glu	Cys	Gln	Arg	Trp	Asp	Leu	Gln	His	Pro	His	Ser	His	Pro	
	210					215					220					
Phe	Gln	Pro	Glu	Lys	Phe	Leu	Asp	Lys	Asp	Leu	Lys	Asp	Asn	Tyr	Cys	
225					230					235					240	
Arg	Asn	Pro	Asp	Gly	Ser	Glu	Arg	Pro	Trp	Cys	Tyr	Thr	Thr	Asp	Pro	
				245					250					255		
Asn	Val	Glu	Arg	Glu	Phe	Cys	Asp	Leu	Pro	Ser	Cys	Gly	Pro	Asn	Leu	
		260						265					270			
Pro	Pro	Thr	Val	Lys	Gly	Ser	Lys	Ser	Gln	Arg	Arg	Asn	Lys	Gly	Lys	
		275					280					285				
Ala	Leu	Asn	Cys	Phe	Arg	Gly	Lys	Gly	Glu	Asp	Tyr	Arg	Gly	Thr	Thr	
	290					295					300					
Asn	Thr	Thr	Ser	Ala	Gly	Val	Pro	Cys	Gln	Arg	Trp	Asp	Ala	Gln	Ser	
305					310					315					320	
Pro	His	Gln	His	Arg	Phe	Val	Pro	Glu	Lys	Tyr	Ala	Cys	Lys	Asp	Leu	
				325					330					335		
Arg	Glu	Asn	Phe	Cys	Arg	Asn	Pro	Asp	Gly	Ser	Glu	Ala	Pro	Trp	Cys	
			340					345					350			
Phe	Thr	Ser	Arg	Pro	Gly	Leu	Arg	Met	Ala	Phe	Cys	His	Gln	Ile	Pro	
		355					360					365				
Arg	Cys	Thr	Glu	Glu	Leu	Val	Pro	Glu	Gly	Cys	Tyr	His	Gly	Ser	Gly	
	370					375					380					
Glu	Gln	Tyr	Arg	Gly	Ser	Val	Ser	Lys	Thr	Arg	Lys	Gly	Val	Gln	Cys	
385					390					395					400	

Gln His Trp Ser Ser Glu Thr Pro His Lys Pro Gln Phe Thr Pro Thr  
 405 410 415  
 Ser Ala Pro Gln Ala Gly Leu Glu Ala Asn Phe Cys Arg Asn Pro Asp  
 420 425 430  
 Gly Asp Ser His Gly Pro Trp Cys Tyr Thr Leu Asp Pro Asp Ile Leu  
 435 440 445  
 Phe Asp Tyr Cys Ala Leu Gln Arg Cys Asp Asp Asp Gln Pro Pro Ser  
 450 455 460  
 Ile Leu Asp Pro Pro Asp Gln Val Val Phe Glu Lys Cys Gly Lys Arg  
 465 470 475 480  
 Val Asp Lys Ser Asn Lys Leu Arg Val Val Gly Gly His Pro Gly Asn  
 485 490 495  
 Ser Pro Trp Thr Val Ser Leu Arg Asn Arg Gln Gly Gln His Phe Cys  
 500 505 510  
 Gly Gly Ser Leu Val Lys Glu Gln Trp Val Leu Thr Ala Arg Gln Cys  
 515 520 525  
 Ile Trp Ser Cys His Glu Pro Leu Thr Gly Tyr Glu Val Trp Leu Gly  
 530 535 540  
 Thr Ile Asn Gln Asn Pro Gln Pro Gly Glu Ala Asn Leu Gln Arg Val  
 545 550 555 560  
 Pro Val Ala Lys Ala Val Cys Gly Pro Ala Gly Ser Gln Leu Val Leu  
 565 570 575  
 Leu Lys Leu Glu Arg Pro Val Ile Leu Asn His His Val Ala Leu Ile  
 580 585 590  
 Cys Leu Pro Pro Glu Gln Tyr Val Val Pro Pro Gly Thr Lys Cys Glu  
 595 600 605  
 Ile Ala Gly Trp Gly Glu Ser Ile Gly Thr Ser Asn Asn Thr Val Leu  
 610 615 620  
 His Val Ala Ser Met Asn Val Ile Ser Asn Gln Glu Cys Asn Thr Lys  
 625 630 635 640  
 Tyr Arg Gly His Ile Gln Glu Ser Glu Ile Cys Thr Gln Gly Leu Val  
 645 650 655  
 Val Pro Val Gly Ala Cys Glu Gly Asp Tyr Gly Gly Pro Leu Ala Cys  
 660 665 670  
 Tyr Thr His Asp Cys Trp Val Leu Gln Gly Leu Ile Ile Pro Asn Arg  
 675 680 685  
 Val Cys Ala Arg Pro Arg Trp Pro Ala Ile Phe Thr Arg Val Ser Val  
 690 695 700

Phe Val Asp Trp Ile Asn Lys Val Met Gln Leu Glu  
705 710 715

<210> 56  
<211> 135  
<212> PRT  
<213> Homo sapiens

<400> 56  
Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser  
1 5 10 15  
Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu  
20 25 30  
Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Val Thr Cys Asp  
35 40 45  
Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln  
50 55 60  
Phe Ser Cys Pro Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly  
65 70 75 80  
Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln  
85 90 95  
His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys  
100 105 110  
Asp Gly Lys Leu Val Val Glu Cys Val Met Asn His Val Ala Cys Thr  
115 120 125  
Arg Ile Tyr Glu Lys Val Glu  
130 135

<210> 57  
<211> 135  
<212> PRT  
<213> Homo sapiens

<400> 57  
Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser  
1 5 10 15  
Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu  
20 25 30  
Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp  
35 40 45  
Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln  
50 55 60

Phe Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly  
 65 70 75 80  
 Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln  
 85 90 95  
 His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys  
 100 105 110  
 Asp Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr  
 115 120 125  
 Arg Ile Tyr Glu Lys Val Glu  
 130 135

<210> 58  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 58  
 Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser  
 1 5 10 15  
 Arg Gly Phe Asp Glu Tyr Val Lys Glu Leu Gly Val Gly Ile Ala Leu  
 20 25 30  
 Arg Lys Met Asp Thr Ile Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp  
 35 40 45  
 Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln  
 50 55 60  
 Phe Ser Cys Thr Leu Gly Glu Asn Phe Glu Glu Thr Thr Ala Asp Gly  
 65 70 75 80  
 Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln  
 85 90 95  
 His Gln Glu Trp Asp Gly Lys Glu Asn Thr Ile Arg Arg Lys Leu Lys  
 100 105 110  
 Asp Gly Lys Leu Val Val Asp Cys Val Met Asn Ser Val Thr Cys Thr  
 115 120 125  
 Arg Ile Tyr Glu Lys Val Glu  
 130 135

<210> 59  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 59  
 Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Leu Asp Ser

1	5	10	15
Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu	20	25	30
Gln Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp	35	40	45
Gly Arg Asn Leu Thr Thr Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln	50	55	60
Phe Ser Cys Thr Leu Gly Asp Glu Phe Glu Glu Thr Thr Ala Asp Gly	65	70	75
Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln	85	90	95
His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys	100	105	110
Asp Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr	115	120	125
Arg Ile Tyr Glu Lys Val Glu	130	135	

<210> 60  
 <211> 135  
 <212> PRT  
 <213> Bos taurus

<400> 60
Met Ala Thr Val Gln Gln Leu Val Gly Arg Trp Arg Leu Val Glu Ser
1 5 10 15
Lys Gly Phe Asp Glu Tyr Met Lys Glu Val Gly Val Gly Met Ala Leu
20 25 30
Arg Lys Val Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Ser Asp
35 40 45
Gly Lys Asn Leu Ser Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln
50 55 60
Phe Ser Cys Lys Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly
65 70 75 80
Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln
85 90 95
His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Glu
100 105 110
Asp Gly Lys Leu Val Val Val Cys Val Met Asn Asn Val Thr Cys Thr
115 120 125

Arg Val Tyr Glu Lys Val Glu  
130 135

<210> 61  
<211> 266  
<212> PRT  
<213> Homo sapiens

<400> 61  
Met Asn Trp Ala Phe Leu Gln Gly Leu Leu Ser Gly Val Asn Lys Tyr  
1 5 10 15  
Ser Thr Val Leu Ser Arg Ile Trp Leu Ser Val Val Phe Ile Phe Arg  
20 25 30  
Val Leu Val Tyr Val Val Ala Ala Glu Glu Val Trp Asp Asp Glu Gln  
35 40 45  
Lys Asp Phe Val Cys Asn Thr Lys Gln Pro Gly Cys Pro Asn Val Cys  
50 55 60  
Tyr Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln  
65 70 75 80  
Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala  
85 90 95  
Tyr Arg Glu Glu Arg Glu Arg Lys His His Leu Lys His Gly Pro Asn  
100 105 110  
Ala Pro Ser Leu Tyr Asp Asn Leu Ser Lys Lys Arg Gly Gly Leu Trp  
115 120 125  
Trp Thr Tyr Leu Leu Ser Leu Ile Phe Lys Ala Ala Val Asp Ala Gly  
130 135 140  
Phe Leu Tyr Ile Phe His Arg Leu Tyr Lys Asp Tyr Asp Met Pro Arg  
145 150 155 160  
Val Val Ala Cys Ser Val Glu Pro Cys Pro His Thr Val Asp Cys Tyr  
165 170 175  
Ile Ser Arg Pro Thr Glu Lys Lys Val Phe Thr Tyr Phe Met Val Thr  
180 185 190  
Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Ser Glu Val Phe Tyr Leu  
195 200 205  
Val Gly Lys Arg Cys Met Glu Ile Phe Gly Pro Arg His Arg Arg Pro  
210 215 220  
Arg Cys Arg Glu Cys Leu Pro Asp Thr Cys Pro Pro Tyr Val Leu Ser  
225 230 235 240  
Gln Gly Gly His Pro Glu Asp Gly Asn Ser Val Leu Met Lys Ala Gly  
245 250 255

Ser Ala Pro Val Asp Ala Gly Gly Tyr Pro  
 260 265

<210> 62  
 <211> 265  
 <212> PRT  
 <213> Rattus norvegicus

<400> 62  
 Met Asn Trp Gly Phe Leu Gln Gly Ile Leu Ser Gly Val Asn Lys Tyr  
 1 5 10 15

Ser Thr Ala Leu Gly Arg Ile Trp Leu Ser Val Val Phe Ile Phe Arg  
 20 25 30

Val Leu Val Tyr Val Val Ala Ala Glu Glu Val Trp Asp Asp Glu Gln  
 35 40 45

Lys Asp Phe Ile Cys Asn Thr Lys Gln Pro Gly Cys Pro Asn Val Cys  
 50 55 60

Tyr Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln  
 65 70 75 80

Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala  
 85 90 95

Tyr Arg Glu Glu Arg Glu Arg Lys His Arg Leu Lys His Gly Pro Asp  
 100 105 110

Ala Pro Ala Leu Tyr Ser Asn Leu Ser Lys Lys Arg Gly Gly Leu Trp  
 115 120 125

Trp Thr Tyr Leu Leu Ser Leu Ile Phe Lys Ala Ala Val Asp Ser Gly  
 130 135 140

Phe Leu Tyr Ile Phe His Cys Ile Tyr Lys Asp Tyr Asp Met Pro Arg  
 145 150 155 160

Val Val Ala Cys Ser Val Gln Pro Cys Pro His Thr Val Asp Cys Tyr  
 165 170 175

Ile Ser Arg Pro Thr Glu Lys Lys Val Phe Thr Tyr Phe Met Val Val  
 180 185 190

Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Ser Glu Val Ala Tyr Leu  
 195 200 205

Val Gly Lys Arg Cys Met Glu Val Phe Arg Pro Arg Arg Gln Lys Thr  
 210 215 220

Ser Arg Arg His Gln Leu Pro Asp Thr Cys Pro Pro Tyr Val Ile Ser  
 225 230 235 240

Lys Gly His Pro Gln Asp Glu Ser Thr Val Leu Thr Lys Ala Gly Met



	245		250		255
Ala Thr Val Asp	Ala Gly Val Tyr Pro				
260		265			
<210> 63					
<211> 266					
<212> PRT					
<213> Mus musculus					
<400> 63					
Met Asn Trp Gly Phe Leu Gln Gly Ile Leu Ser Gly Val Asn Lys Tyr					
1	5	10		15	
Ser Thr Ala Leu Gly Arg Ile Trp Leu Ser Val Val Phe Ile Phe Arg					
	20	25		30	
Val Leu Val Tyr Val Val Ala Ala Glu Glu Val Trp Asp Asp Asp Gln					
	35	40		45	
Lys Asp Phe Ile Cys Asn Thr Lys Gln Pro Gly Cys Pro Asn Val Cys					
	50	55		60	
Tyr Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln					
	65	70		75	80
Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala					
	85	90		95	
Tyr Arg Glu Glu Arg Glu Arg Lys His Arg Leu Lys His Gly Pro Asn					
	100	105		110	
Ala Pro Ala Leu Tyr Ser Asn Leu Ser Lys Lys Arg Gly Gly Leu Trp					
	115	120		125	
Trp Thr Tyr Leu Leu Ser Leu Ile Phe Lys Ala Ala Val Asp Ser Gly					
	130	135		140	
Phe Leu Tyr Ile Phe His Cys Ile Tyr Lys Asp Tyr Asp Met Pro Arg					
	145	150		155	160
Val Val Ala Cys Ser Val Thr Pro Cys Pro His Thr Val Asp Cys Tyr					
	165	170		175	
Ile Ala Arg Pro Thr Glu Lys Lys Val Phe Thr Tyr Phe Met Val Val					
	180	185		190	
Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Ser Glu Val Val Tyr Leu					
	195	200		205	
Val Gly Lys Arg Cys Met Glu Val Phe Arg Pro Arg Arg Arg Lys Ala					
	210	215		220	
Ser Arg Arg His Gln Leu Pro Asp Thr Cys Pro Pro Tyr Val Ile Ser					
	225	230		235	240

Lys Gly Gly His Pro Gln Asp Glu Ser Val Ile Leu Thr Lys Ala Gly  
245 250 255

Met Ala Thr Val Asp Ala Gly Val Tyr Pro  
260 265

<210> 64  
<211> 273  
<212> PRT  
<213> Homo sapiens

<400> 64  
Met Asn Trp Ser Ile Phe Glu Gly Leu Leu Ser Gly Val Asn Lys Tyr  
1 5 10 15

Ser Thr Ala Phe Gly Arg Ile Trp Leu Ser Leu Val Phe Ile Phe Arg  
20 25 30

Val Leu Val Tyr Leu Val Thr Ala Glu Arg Val Trp Ser Asp Asp His  
35 40 45

Lys Asp Phe Asp Cys Asn Thr Arg Gln Pro Gly Cys Ser Asn Val Cys  
50 55 60

Phe Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln  
65 70 75 80

Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala  
85 90 95

Tyr Arg Glu Val Gln Glu Lys Arg His Arg Glu Ala His Gly Glu Asn  
100 105 110

Ser Gly Arg Leu Tyr Leu Asn Pro Gly Lys Lys Arg Gly Gly Leu Trp  
115 120 125

Trp Thr Tyr Val Cys Ser Leu Val Phe Lys Ala Ser Val Asp Ile Ala  
130 135 140

Phe Leu Tyr Val Phe His Ser Phe Tyr Pro Lys Tyr Ile Leu Pro Pro  
145 150 155 160

Val Val Lys Cys His Ala Asp Pro Cys Pro Asn Ile Val Asp Cys Phe  
165 170 175

Ile Ser Lys Pro Ser Glu Lys Asn Ile Phe Thr Leu Phe Met Val Ala  
180 185 190

Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Val Glu Leu Ile Tyr Leu  
195 200 205

Val Ser Lys Arg Cys His Glu Cys Leu Ala Ala Arg Lys Ala Gln Ala  
210 215 220

Met Cys Thr Gly His His Pro His Gly Thr Thr Ser Ser Cys Lys Gln  
225 230 235 240

Asp Asp Leu Leu Ser Gly Asp Leu Ile Phe Leu Gly Ser Asp Ser His  
245 250 255

Pro Pro Leu Leu Pro Asp Arg Pro Arg Asp His Val Lys Lys Thr Ile  
260 265 270

Leu

<210> 65

<211> 273

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (41)

<223> Wherein Xaa is any amino acid.

<400> 65

Met Asn Trp Ser Ile Phe Glu Gly Leu Leu Ser Gly Val Asn Lys Tyr  
1 5 10 15

Ser Thr Ala Phe Gly Arg Ile Trp Leu Ser Leu Val Phe Ile Phe Arg  
20 25 30

Val Leu Val Tyr Leu Val Thr Ala Xaa Arg Val Trp Ser Asp Asp His  
35 40 45

Lys Asp Phe Asp Cys Asn Thr Arg Gln Pro Gly Cys Ser Asn Val Cys  
50 55 60

Phe Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln  
65 70 75 80

Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala  
85 90 95

Tyr Arg Glu Val Gln Glu Lys Arg His Arg Glu Ala His Gly Glu Asn  
100 105 110

Ser Gly Arg Leu Tyr Leu Asn Pro Gly Lys Lys Arg Gly Gly Leu Trp  
115 120 125

Trp Thr Tyr Val Cys Ser Leu Val Phe Lys Ala Ser Val Asp Ile Ala  
130 135 140

Phe Leu Tyr Val Phe His Ser Phe Tyr Pro Lys Tyr Ile Leu Pro Pro  
145 150 155 160

Val Val Lys Cys His Ala Asp Pro Cys Pro Asn Ile Val Asp Cys Phe  
165 170 175

Ile Ser Lys Pro Ser Glu Lys Asn Ile Phe Thr Leu Phe Met Val Ala  
180 185 190

Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Val Glu Leu Ile Tyr Leu  
 195 200 205  
 Val Ser Lys Arg Cys His Glu Cys Leu Ala Ala Arg Lys Ala Gln Ala  
 210 215 220  
 Met Cys Thr Gly His His Pro His Gly Thr Thr Ser Ser Cys Lys Gln  
 225 230 235 240  
 Asp Asp Leu Leu Ser Gly Asp Leu Ile Phe Leu Gly Ser Asp Ser His  
 245 250 255  
 Pro Pro Leu Leu Pro Asp Arg Pro Arg Asp His Val Lys Lys Thr Ile  
 260 265 270

Leu

<210> 66  
 <211> 434  
 <212> PRT  
 <213> Homo sapiens

<400> 66  
 Ala Lys Gln Gln Leu Asn Leu Arg Thr His Met Ala Asp Glu Asn Lys  
 1 5 10 15  
 Asn Glu Tyr Ala Ala Gln Leu Gln Asn Phe Asn Gly Glu Gln His Lys  
 20 25 30  
 His Phe Tyr Val Val Ile Pro Gln Ile Tyr Lys Gln Leu Gln Glu Met  
 35 40 45  
 Asp Glu Arg Arg Thr Ile Lys Leu Ser Glu Cys Tyr Arg Gly Phe Ala  
 50 55 60  
 Asp Ser Glu Arg Lys Val Ile Pro Ile Ile Ser Lys Cys Leu Glu Gly  
 65 70 75 80  
 Met Ile Leu Ala Ala Lys Ser Val Asp Glu Arg Arg Asp Ser Gln Met  
 85 90 95  
 Val Val Asp Ser Phe Lys Ser Gly Phe Glu Pro Pro Gly Asp Phe Pro  
 100 105 110  
 Phe Glu Asp Tyr Ser Gln His Ile Tyr Arg Thr Ile Ser Asp Gly Thr  
 115 120 125  
 Ile Ser Ala Ser Lys Gln Glu Ser Gly Lys Met Asp Ala Lys Thr Thr  
 130 135 140  
 Val Gly Lys Ala Lys Gly Lys Leu Trp Leu Phe Gly Lys Lys Pro Lys  
 145 150 155 160  
 Pro Gln Ser Pro Pro Leu Thr Pro Thr Ser Leu Phe Thr Ser Ser Thr



<213> Homo sapiens

<400> 67

Met	Asp	Glu	Arg	Arg	Thr	Ile	Lys	Leu	Ser	Glu	Cys	Tyr	Arg	Gly	Phe
1				5					10					15	
Ala	Asp	Ser	Glu	Arg	Lys	Val	Ile	Pro	Ile	Ile	Ser	Lys	Cys	Leu	Glu
			20					25					30		
Gly	Met	Ile	Leu	Ala	Ala	Lys	Ser	Val	Asp	Glu	Arg	Arg	Asp	Ser	Gln
		35					40					45			
Met	Val	Val	Asp	Ser	Phe	Lys	Ser	Gly	Phe	Glu	Pro	Pro	Gly	Asp	Phe
	50					55					60				
Pro	Phe	Glu	Asp	Tyr	Ser	Gln	His	Ile	Tyr	Arg	Thr	Ile	Ser	Asp	Gly
65					70					75					80
Thr	Ile	Ser	Ala	Ser	Lys	Gln	Glu	Ser	Gly	Lys	Met	Asp	Ala	Lys	Thr
				85					90					95	
Thr	Val	Gly	Lys	Ala	Lys	Gly	Lys	Leu	Trp	Leu	Phe	Gly	Lys	Lys	Pro
			100					105					110		
Lys	Gly	Pro	Ala	Leu	Glu	Asp	Phe	Ser	His	Leu	Pro	Pro	Glu	Gln	Arg
		115					120					125			
Arg	Lys	Lys	Leu	Gln	Gln	Arg	Ile	Asp	Glu	Leu	Asn	Arg	Glu	Leu	Gln
	130					135					140				
Lys	Glu	Ser	Asp	Gln	Lys	Asp	Ala	Leu	Asn	Lys	Met	Lys	Asp	Val	Tyr
145					150					155					160
Glu	Lys	Asn	Pro	Gln	Met	Gly	Asp	Pro	Gly	Ser	Leu	Gln	Pro	Lys	Leu
				165					170					175	
Ala	Glu	Thr	Met	Asn	Asn	Ile	Asp	Arg	Leu	Arg	Met	Glu	Ile	His	Lys
			180					185					190		
Asn	Glu	Ala	Trp	Leu	Ser	Glu	Val	Glu	Gly	Lys	Thr	Gly	Gly	Arg	Gly
		195					200					205			
Asp	Arg	Arg	His	Ser	Ser	Asp	Ile	Asn	His	Leu	Val	Thr	Gln	Gly	Arg
	210					215					220				
Glu	Ser	Pro	Glu	Gly	Ser	Tyr	Thr	Asp	Asp	Ala	Asn	Gln	Glu	Val	Arg
225					230					235					240
Gly	Pro	Pro	Gln	Gln	His	Gly	His	His	Asn	Glu	Phe	Asp	Asp	Glu	Phe
				245					250					255	
Glu	Asp	Asp	Asp	Pro	Leu	Pro	Ala	Ile	Gly	His	Cys	Lys	Ala	Ile	Tyr
			260					265					270		
Pro	Phe	Asp	Gly	His	Asn	Glu	Gly	Thr	Leu	Ala	Met	Lys	Glu	Gly	Glu
		275					280					285			

Val Leu Tyr Ile Ile Glu Glu Asp Lys Gly Asp Gly Trp Thr Arg Ala  
 290 295 300

Arg Arg Gln Asn Gly Glu Glu Gly Tyr Val Pro Thr Ser Tyr Ile Asp  
 305 310 315 320

Val Thr Leu Glu Lys Asn Ser Lys Gly Ser  
 325 330

<210> 68

<211> 592

<212> PRT

<213> Homo sapiens

<400> 68

Met Ser Trp Gly Thr Glu Leu Trp Asp Gln Phe Asp Asn Leu Glu Lys  
 1 5 10 15

His Thr Gln Trp Gly Ile Asp Ile Leu Glu Lys Tyr Ile Lys Phe Val  
 20 25 30

Lys Glu Arg Thr Glu Ile Glu Leu Ser Tyr Ala Lys Gln Leu Arg Asn  
 35 40 45

Leu Ser Lys Lys Tyr Gln Pro Lys Lys Asn Ser Lys Glu Glu Glu Glu  
 50 55 60

Tyr Lys Tyr Thr Ser Cys Lys Ala Phe Ile Ser Asn Leu Asn Glu Met  
 65 70 75 80

Asn Asp Tyr Ala Gly Gln His Glu Val Ile Ser Glu Asn Met Ala Ser  
 85 90 95

Gln Ile Ile Val Asp Leu Ala Arg Tyr Val Gln Glu Leu Lys Gln Glu  
 100 105 110

Arg Lys Ser Asn Phe His Asp Gly Arg Lys Ala Gln Gln His Ile Glu  
 115 120 125

Thr Cys Trp Lys Gln Leu Glu Ser Ser Lys Arg Arg Phe Glu Arg Asp  
 130 135 140

Cys Lys Glu Ala Asp Arg Ala Gln Gln Tyr Phe Glu Lys Met Asp Ala  
 145 150 155 160

Asp Ile Asn Val Thr Lys Ala Asp Val Glu Lys Ala Arg Gln Gln Ala  
 165 170 175

Gln Ile Arg His Gln Met Ala Glu Asp Ser Lys Ala Asp Tyr Ser Ser  
 180 185 190

Ile Leu Gln Lys Phe Asn His Glu Gln His Glu Tyr Tyr His Thr His  
 195 200 205

Ile Pro Asn Ile Phe Gln Lys Ile Gln Glu Met Glu Glu Arg Arg Ile  
 210 215 220

Val	Arg	Met	Gly	Glu	Ser	Met	Lys	Thr	Tyr	Ala	Glu	Val	Asp	Arg	Gln	225	230	235	240
Val	Ile	Pro	Ile	Ile	Gly	Lys	Cys	Leu	Asp	Gly	Ile	Val	Lys	Ala	Ala	245	250	255	
Glu	Ser	Ile	Asp	Gln	Lys	Asn	Asp	Ser	Gln	Leu	Val	Ile	Glu	Ala	Tyr	260	265	270	
Lys	Ser	Gly	Phe	Glu	Pro	Pro	Gly	Asp	Ile	Glu	Phe	Glu	Asp	Tyr	Thr	275	280	285	
Gln	Pro	Met	Lys	Arg	Thr	Val	Ser	Asp	Asn	Ser	Leu	Ser	Asn	Ser	Arg	290	295	300	
Gly	Glu	Gly	Lys	Pro	Asp	Leu	Lys	Phe	Gly	Gly	Lys	Ser	Lys	Gly	Lys	305	310	315	320
Leu	Trp	Pro	Phe	Ile	Lys	Lys	Asn	Lys	Ser	Pro	Lys	Gln	Gln	Lys	Glu	325	330	335	
Pro	Leu	Ser	His	Arg	Phe	Asn	Glu	Phe	Met	Thr	Ser	Lys	Pro	Lys	Ile	340	345	350	
His	Cys	Phe	Arg	Ser	Leu	Lys	Arg	Gly	Leu	Ser	Leu	Lys	Leu	Gly	Ala	355	360	365	
Thr	Pro	Glu	Asp	Phe	Ser	Asn	Leu	Pro	Pro	Glu	Gln	Arg	Arg	Lys	Lys	370	375	380	
Leu	Gln	Gln	Lys	Val	Asp	Glu	Leu	Asn	Lys	Glu	Ile	Gln	Lys	Glu	Met	385	390	395	400
Asp	Gln	Arg	Asp	Ala	Ile	Thr	Lys	Met	Lys	Asp	Val	Tyr	Leu	Lys	Asn	405	410	415	
Pro	Gln	Met	Gly	Asp	Pro	Ala	Ser	Leu	Asp	His	Lys	Leu	Ala	Glu	Val	420	425	430	
Ser	Gln	Asn	Ile	Glu	Lys	Leu	Arg	Val	Glu	Thr	Gln	Lys	Phe	Glu	Ala	435	440	445	
Trp	Leu	Ala	Glu	Val	Glu	Gly	Arg	Leu	Pro	Ala	Arg	Asn	Glu	Gln	Ala	450	455	460	
Arg	Arg	Gln	Ser	Gly	Leu	Tyr	Asp	Ser	Gln	Asn	Pro	Pro	Thr	Val	Asn	465	470	475	480
Asn	Cys	Ala	Gln	Asp	Arg	Glu	Ser	Pro	Asp	Gly	Ser	Tyr	Thr	Glu	Glu	485	490	495	
Gln	Ser	Gln	Glu	Ser	Glu	Met	Lys	Val	Leu	Ala	Thr	Asp	Phe	Asp	Asp	500	505	510	
Glu	Phe	Asp	Asp	Glu	Glu	Pro	Leu	Pro	Ala	Ile	Gly	Thr	Cys	Lys	Ala	515	520	525	



Leu Tyr Thr Phe Glu Gly Gln Asn Glu Gly Thr Ile Ser Val Val Glu  
 530 535 540  
 Gly Glu Thr Leu Tyr Val Ile Glu Glu Asp Lys Gly Asp Gly Trp Thr  
 545 550 555 560  
 Arg Ile Arg Arg Asn Glu Asp Glu Glu Gly Tyr Val Pro Thr Ser Tyr  
 565 570 575  
 Val Glu Val Cys Leu Asp Lys Asn Ala Lys Gly Ala Lys Thr Tyr Ile  
 580 585 590

<210> 69  
 <211> 679  
 <212> PRT  
 <213> Homo sapiens

<400> 69  
 Leu Trp Asn Gly Gly Glu Glu Glu Pro Pro Arg Arg Pro Arg Ala Arg  
 1 5 10 15  
 Ser Cys Glu Pro Glu Glu Ala Ala Arg Thr Pro Gly Phe Pro Pro Ser  
 20 25 30  
 Arg Gly Ser Arg Gly Ala Lys Gly Ser Pro Gly Arg Gly Thr Arg Glu  
 35 40 45  
 Pro Arg Pro Pro Arg Gly Ala Pro Leu Arg Val Pro Cys Thr Met Ser  
 50 55 60  
 Trp Gly Thr Glu Leu Trp Asp Gln Phe Asp Asn Leu Glu Lys His Thr  
 65 70 75 80  
 Gln Trp Gly Ile Asp Ile Leu Glu Lys Tyr Ile Lys Phe Val Lys Glu  
 85 90 95  
 Arg Thr Glu Ile Glu Leu Ser Tyr Ala Lys Gln Leu Arg Asn Leu Ser  
 100 105 110  
 Lys Lys Tyr Gln Pro Lys Lys Asn Ser Lys Glu Glu Glu Glu Tyr Lys  
 115 120 125  
 Tyr Thr Ser Cys Lys Ala Phe Ile Ser Asn Leu Asn Glu Met Asn Asp  
 130 135 140  
 Tyr Ala Gly Gln His Glu Val Ile Ser Glu Asn Met Ala Ser Gln Ile  
 145 150 155 160  
 Ile Val Asp Leu Ala Arg Tyr Val Gln Glu Leu Lys Gln Glu Arg Lys  
 165 170 175  
 Ser Asn Phe His Asp Gly Arg Lys Ala Gln Gln His Ile Glu Thr Cys

180					185					190					
Trp	Lys	Gln	Leu	Glu	Ser	Ser	Lys	Arg	Arg	Phe	Glu	Arg	Asp	Cys	Lys
		195					200					205			
Glu	Ala	Asp	Arg	Ala	Gln	Gln	Tyr	Phe	Glu	Lys	Met	Asp	Ala	Asp	Ile
	210					215					220				
Asn	Val	Thr	Lys	Ala	Asp	Val	Glu	Lys	Ala	Arg	Gln	Gln	Ala	Gln	Ile
225					230					235					240
Arg	His	Gln	Met	Ala	Glu	Asp	Ser	Lys	Ala	Asp	Tyr	Ser	Ser	Ile	Leu
			245						250					255	
Gln	Lys	Phe	Asn	His	Glu	Gln	His	Glu	Tyr	Tyr	His	Thr	His	Ile	Pro
			260					265					270		
Asn	Ile	Phe	Gln	Lys	Ile	Gln	Glu	Met	Glu	Glu	Arg	Arg	Ile	Val	Arg
	275						280					285			
Met	Gly	Glu	Ser	Met	Lys	Thr	Tyr	Ala	Glu	Val	Asp	Arg	Gln	Val	Ile
	290					295					300				
Pro	Ile	Ile	Gly	Lys	Cys	Leu	Asp	Gly	Ile	Val	Lys	Ala	Ala	Glu	Ser
305					310					315					320
Ile	Asp	Gln	Lys	Asn	Asp	Ser	Gln	Leu	Val	Ile	Glu	Ala	Tyr	Lys	Ser
				325					330					335	
Gly	Phe	Glu	Pro	Pro	Gly	Asp	Ile	Glu	Phe	Glu	Asp	Tyr	Thr	Gln	Pro
			340					345					350		
Met	Lys	Arg	Thr	Val	Ser	Asp	Asn	Ser	Leu	Ser	Asn	Ser	Arg	Gly	Glu
		355					360					365			
Gly	Lys	Pro	Asp	Leu	Lys	Phe	Gly	Gly	Lys	Ser	Lys	Gly	Lys	Leu	Trp
	370					375					380				
Pro	Phe	Ile	Lys	Lys	Asn	Lys	Leu	Met	Ser	Leu	Leu	Thr	Ser	Pro	His
385					390					395					400
Gln	Pro	Pro	Pro	Pro	Pro	Pro	Ala	Ser	Ala	Ser	Pro	Ser	Ala	Val	Pro
				405					410					415	
Asn	Gly	Pro	Gln	Ser	Pro	Lys	Gln	Gln	Lys	Glu	Pro	Leu	Ser	His	Arg
			420					425					430		
Phe	Asn	Glu	Phe	Met	Thr	Ser	Lys	Pro	Lys	Ile	His	Cys	Phe	Arg	Ser
	435						440					445			
Leu	Lys	Arg	Gly	Leu	Ser	Leu	Lys	Leu	Gly	Ala	Thr	Pro	Glu	Asp	Phe
	450					455					460				
Ser	Asn	Leu	Pro	Pro	Glu	Gln	Arg	Arg	Lys	Lys	Leu	Gln	Gln	Lys	Val
465					470					475					480
Asp	Glu	Leu	Asn	Lys	Glu	Ile	Gln	Lys	Glu	Met	Asp	Gln	Arg	Asp	Ala



Trp	Asp	Gln	Phe	Asp	Asn	Leu	Glu	Lys	His	Thr	Gln	Trp	Gly	Ile	Asp	
65					70					75					80	
Ile	Leu	Glu	Lys	Tyr	Ile	Lys	Phe	Val	Lys	Glu	Arg	Thr	Glu	Ile	Glu	
			85						90					95		
Leu	Ser	Tyr	Ala	Lys	Gln	Leu	Arg	Asn	Leu	Ser	Lys	Lys	Tyr	Gln	Pro	
			100					105					110			
Lys	Lys	Asn	Ser	Lys	Glu	Glu	Glu	Glu	Tyr	Lys	Tyr	Thr	Ser	Cys	Lys	
		115					120					125				
Ala	Phe	Ile	Ser	Asn	Leu	Asn	Glu	Met	Asn	Asp	Tyr	Ala	Gly	Gln	His	
	130					135					140					
Glu	Val	Ile	Ser	Glu	Asn	Met	Ala	Ser	Gln	Ile	Ile	Val	Asp	Leu	Ala	
145					150					155					160	
Arg	Tyr	Val	Gln	Glu	Leu	Lys	Gln	Glu	Arg	Lys	Ser	Asn	Phe	His	Asp	
			165						170					175		
Gly	Arg	Lys	Ala	Gln	Gln	His	Ile	Glu	Thr	Cys	Trp	Lys	Gln	Leu	Glu	
			180					185					190			
Ser	Ser	Lys	Arg	Arg	Phe	Glu	Arg	Asp	Cys	Lys	Glu	Ala	Asp	Arg	Ala	
		195					200					205				
Gln	Gln	Tyr	Phe	Glu	Lys	Met	Asp	Ala	Asp	Ile	Asn	Val	Thr	Lys	Ala	
	210					215					220					
Asp	Val	Glu	Lys	Ala	Arg	Gln	Gln	Ala	Gln	Ile	Arg	His	Gln	Met	Ala	
225					230					235					240	
Glu	Asp	Ser	Lys	Ala	Asp	Tyr	Ser	Ser	Ile	Leu	Gln	Lys	Phe	Asn	His	
			245						250					255		
Glu	Gln	His	Glu	Tyr	Tyr	His	Thr	His	Ile	Pro	Asn	Ile	Phe	Gln	Lys	
		260						265					270			
Ile	Gln	Glu	Met	Glu	Glu	Arg	Arg	Ile	Val	Arg	Met	Gly	Glu	Ser	Met	
	275						280					285				
Lys	Thr	Tyr	Ala	Glu	Val	Asp	Arg	Gln	Val	Ile	Pro	Ile	Ile	Gly	Lys	
	290					295					300					
Cys	Leu	Asp	Gly	Ile	Val	Lys	Ala	Ala	Glu	Ser	Ile	Asp	Gln	Lys	Asn	
305					310					315					320	
Asp	Ser	Gln	Leu	Val	Ile	Glu	Ala	Tyr	Lys	Ser	Gly	Phe	Glu	Pro	Pro	
			325						330					335		
Gly	Asp	Ile	Glu	Phe	Glu	Asp	Tyr	Thr	Gln	Pro	Met	Lys	Arg	Thr	Val	
		340						345					350			
Ser	Asp	Asn	Ser	Leu	Ser	Asn	Ser	Arg	Gly	Glu	Gly	Lys	Pro	Asp	Leu	
		355					360					365				

Lys Phe Gly Gly Lys Ser Lys Gly Lys Leu Trp Pro Phe Ile Lys Lys  
 370 375 380  
 Asn Lys Leu Met Ser Leu Leu Thr Ser Pro His Gln Pro Pro Pro Pro  
 385 390 395 400  
 Pro Pro Ala Ser Ala Ser Pro Ser Ala Val Pro Asn Gly Pro Gln Ser  
 405 410 415  
 Pro Lys Gln Gln Lys Glu Pro Leu Ser His Arg Phe Asn Glu Phe Met  
 420 425 430  
 Thr Ser Lys Pro Lys Ile His Cys Phe Arg Ser Leu Lys Arg Gly Leu  
 435 440 445  
 Ser Leu Lys Leu Gly Ala Thr Pro Glu Asp Phe Ser Asn Leu Pro Pro  
 450 455 460  
 Glu Gln Arg Arg Lys Lys Leu Gln Gln Lys Val Asp Glu Leu Asn Lys  
 465 470 475 480  
 Glu Ile Gln Lys Glu Met Asp Gln Arg Asp Ala Ile Thr Lys Met Lys  
 485 490 495  
 Asp Val Tyr Leu Lys Asn Pro Gln Met Gly Asp Pro Ala Ser Leu Asp  
 500 505 510  
 His Lys Leu Ala Glu Val Ser Gln Asn Ile Glu Lys Leu Arg Val Glu  
 515 520 525  
 Thr Gln Lys Phe Glu Ala Trp Leu Ala Glu Val Glu Gly Arg Leu Pro  
 530 535 540  
 Ala Arg Ser Glu Gln Ala Arg Arg Gln Ser Gly Leu Tyr Asp Ser Gln  
 545 550 555 560  
 Asn Pro Pro Thr Val Asn Asn Cys Ala Gln Asp Arg Glu Ser Pro Asp  
 565 570 575  
 Gly Ser Tyr Thr Glu Glu Gln Ser Gln Glu Ser Glu Met Lys Val Leu  
 580 585 590  
 Ala Thr Asp Phe Asp Asp Glu Phe Asp Asp Glu Glu Pro Leu Pro Ala  
 595 600 605  
 Ile Gly Thr Cys Lys Ala Leu Tyr Thr Phe Glu Gly Gln Asn Glu Gly  
 610 615 620  
 Thr Ile Ser Val Val Glu Gly Glu Thr Leu Tyr Val Ile Glu Glu Asp  
 625 630 635 640  
 Lys Gly Asp Gly Trp Thr Arg Ile Arg Arg Asn Glu Asp Glu Glu Gly  
 645 650 655  
 Tyr Val Pro Thr Ser Tyr Val Glu Val Cys Leu Asp Lys Asn Ala Lys  
 660 665 670

Asp Ser

<210> 71

<211> 457

<212> PRT

<213> Homo sapiens

<400> 71

Met Ser Leu Met Leu Asp Asp Gln Pro Pro Met Glu Ala Gln Tyr Ala  
1 5 10 15

Glu Glu Gly Pro Gly Pro Gly Ile Phe Arg Ala Glu Pro Gly Asp Gln  
20 25 30

Gln His Pro Ile Ser Gln Ala Val Cys Trp Arg Ser Met Arg Arg Gly  
35 40 45

Cys Ala Val Leu Gly Ala Leu Gly Leu Leu Ala Gly Ala Gly Val Gly  
50 55 60

Ser Trp Leu Leu Val Leu Tyr Leu Cys Pro Ala Ala Ser Gln Pro Ile  
65 70 75 80

Ser Gly Thr Leu Gln Asp Glu Glu Ile Thr Leu Ser Cys Ser Glu Ala  
85 90 95

Ser Ala Glu Glu Ala Leu Leu Pro Ala Leu Pro Lys Thr Val Ser Phe  
100 105 110

Arg Ile Asn Ser Glu Asp Phe Leu Leu Glu Ala Gln Val Arg Asp Gln  
115 120 125

Pro Arg Trp Leu Leu Val Cys His Glu Gly Trp Ser Pro Ala Leu Gly  
130 135 140

Leu Gln Ile Cys Trp Ser Leu Gly His Leu Arg Leu Thr His His Lys  
145 150 155 160

Gly Val Asn Leu Thr Asp Ile Lys Leu Asn Ser Ser Gln Glu Phe Ala  
165 170 175

Gln Leu Ser Pro Arg Leu Gly Gly Phe Leu Glu Glu Ala Trp Gln Pro  
180 185 190

Arg Asn Asn Cys Thr Ser Gly Gln Val Val Ser Leu Arg Cys Ser Glu  
195 200 205

Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile Val Gly Gly Gln Ser Val  
210 215 220

Ala Pro Gly Arg Trp Pro Trp Gln Ala Ser Val Ala Leu Gly Phe Arg  
225 230 235 240

His Thr Cys Gly Gly Ser Val Leu Ala Pro Arg Trp Val Val Thr Ala  
245 250 255

Ala His Cys Met His Ser Phe Arg Leu Ala Arg Leu Ser Ser Trp Arg  
 260 265 270  
 Val His Ala Gly Leu Val Ser His Ser Ala Val Arg Pro His Gln Gly  
 275 280 285  
 Ala Leu Val Glu Arg Ile Ile Pro His Pro Leu Tyr Ser Ala Gln Asn  
 290 295 300  
 His Asp Tyr Asp Val Ala Leu Leu Arg Leu Gln Thr Ala Leu Asn Phe  
 305 310 315 320  
 Ser Asp Thr Val Gly Ala Val Cys Leu Pro Ala Lys Glu Gln His Phe  
 325 330 335  
 Pro Lys Gly Ser Arg Cys Trp Val Ser Gly Trp Gly His Thr His Pro  
 340 345 350  
 Ser His Thr Tyr Ser Ser Asp Met Leu Gln Asp Thr Val Val Pro Leu  
 355 360 365  
 Phe Ser Thr Gln Leu Cys Asn Ser Ser Cys Val Tyr Ser Gly Ala Leu  
 370 375 380  
 Thr Pro Arg Met Leu Cys Ala Gly Tyr Leu Asp Gly Arg Ala Asp Ala  
 385 390 395 400  
 Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Pro Asp Gly Asp Thr  
 405 410 415  
 Trp Arg Leu Val Gly Val Val Ser Trp Gly Arg Ala Cys Ala Glu Pro  
 420 425 430  
 Asn His Pro Gly Val Tyr Ala Lys Val Ala Glu Phe Leu Asp Trp Ile  
 435 440 445  
 His Asp Thr Ala Gln Asp Ser Leu Leu  
 450 455

<210> 72  
 <211> 455  
 <212> PRT  
 <213> Mus musculus

<400> 72  
 Met Ser Pro Thr Leu Asp Asp Gln Ser Pro Met Glu Ile Arg Cys Thr  
 1 5 10 15  
 Glu Glu Gly Ala Gly Pro Gly Ile Phe Arg Met Glu Leu Gly Asp Gln  
 20 25 30  
 Arg Gln Ser Ile Ser Gln Ser Gln Arg Trp Cys Cys Leu Gln Arg Gly  
 35 40 45  
 Cys Val Ile Leu Gly Val Leu Gly Leu Leu Ala Gly Ala Gly Ile Ala

50	55	60
Ser Trp Leu Leu Val Leu Tyr Leu Trp Pro Ala Ala Ser Pro Ser Ile		
65	70	75 80
Ser Gly Thr Leu Gln Glu Glu Glu Met Thr Leu Asn Cys Pro Gly Val		
	85	90 95
Ser Cys Glu Glu Glu Leu Leu Pro Ser Leu Pro Lys Thr Val Ser Phe		
	100	105 110
Arg Ile Asn Gly Glu Asp Leu Leu Leu Gln Val Gln Val Arg Ala Arg		
	115	120 125
Pro Asp Trp Leu Leu Val Cys His Glu Gly Trp Ser Pro Ala Leu Gly		
	130	135 140
Met His Ile Cys Lys Ser Leu Gly His Ile Arg Leu Thr Gln His Lys		
145	150	155 160
Ala Val Asn Leu Ser Asp Ile Lys Leu Asn Arg Ser Gln Glu Phe Ala		
	165	170 175
Gln Leu Ser Ala Arg Pro Gly Gly Leu Val Glu Glu Ala Trp Lys Pro		
	180	185 190
Ser Ala Asn Cys Pro Ser Gly Arg Ile Val Ser Leu Lys Cys Ser Glu		
	195	200 205
Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile Val Gly Gly Gln Ala Val		
	210	215 220
Ala Ser Gly Arg Trp Pro Trp Gln Ala Ser Val Met Leu Gly Ser Arg		
225	230	235 240
His Thr Cys Gly Ala Ser Val Leu Ala Pro His Trp Val Val Thr Ala		
	245	250 255
Ala His Cys Met Tyr Ser Phe Arg Leu Ser Arg Leu Ser Ser Trp Arg		
	260	265 270
Val His Ala Gly Leu Val Ser His Gly Ala Val Arg Gln His Gln Gly		
	275	280 285
Thr Met Val Glu Lys Ile Ile Pro His Pro Leu Tyr Ser Ala Gln Asn		
	290	295 300
His Asp Tyr Asp Val Ala Leu Leu Gln Leu Arg Thr Pro Ile Asn Phe		
305	310	315 320
Ser Asp Thr Val Asp Ala Val Cys Leu Pro Ala Lys Glu Gln Tyr Phe		
	325	330 335
Pro Trp Gly Ser Gln Cys Trp Val Ser Gly Trp Gly His Thr Asp Pro		
	340	345 350
Ser His Thr His Ser Ser Asp Thr Leu Gln Asp Thr Met Val Pro Leu		



355	360	365
Leu Ser Thr His Leu Cys Asn Ser Ser Cys Met Tyr Ser Gly Ala Leu		
370	375	380
Thr His Arg Met Leu Cys Ala Gly Tyr Leu Asp Gly Arg Ala Asp Ala		
385	390	395 400
Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Pro Ser Gly Asp Thr		
	405 410	415
Trp His Leu Val Gly Val Val Ser Trp Gly Arg Gly Cys Ala Glu Pro		
	420 425	430
Asn Arg Pro Gly Val Tyr Ala Lys Val Ala Glu Phe Leu Asp Trp Ile		
	435 440	445
His Asp Thr Val Gln Val Arg		
450	455	
<210> 73		
<211> 445		
<212> PRT		
<213> Mus musculus		
<400> 73		
Met Glu Ile Arg Cys Thr Glu Glu Gly Ala Gly Pro Gly Ile Phe Arg		
1 5 10 15		
Met Glu Leu Gly Asp Gln Arg Gln Ser Ile Ser Gln Ser Gln Arg Trp		
	20 25 30	
Cys Cys Leu Gln Arg Gly Cys Val Ile Leu Gly Val Leu Gly Leu Leu		
	35 40 45	
Ala Gly Ala Gly Ile Ala Ser Trp Leu Leu Val Leu Tyr Leu Trp Pro		
	50 55 60	
Ala Ala Ser Pro Ser Ile Ser Gly Thr Leu Gln Glu Glu Glu Met Thr		
	65 70 75 80	
Leu Asn Cys Pro Gly Val Ser Cys Glu Glu Glu Leu Leu Pro Ser Leu		
	85 90 95	
Pro Lys Thr Val Ser Phe Arg Ile Asn Gly Glu Asp Leu Leu Leu Gln		
	100 105 110	
Val Gln Val Arg Ala Arg Pro Asp Trp Leu Leu Val Cys His Glu Gly		
	115 120 125	
Trp Ser Pro Ala Leu Gly Met His Ile Cys Lys Ser Leu Gly His Ile		
	130 135 140	
Arg Leu Thr Gln His Lys Ala Val Asn Leu Ser Asp Ile Lys Leu Asn		
	145 150 155 160	

Arg Ser Gln Glu Phe Ala Gln Leu Ser Ala Arg Pro Gly Gly Leu Val  
 165 170 175  
 Glu Glu Ala Trp Lys Pro Ser Ala Asn Cys Pro Ser Gly Arg Ile Val  
 180 185 190  
 Ser Leu Lys Cys Ser Glu Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile  
 195 200 205  
 Val Gly Gly Gln Ala Val Ala Ser Gly Arg Trp Pro Trp Gln Ala Ser  
 210 215 220  
 Val Met Leu Gly Ser Arg His Thr Cys Gly Ala Ser Val Leu Ala Pro  
 225 230 235 240  
 His Trp Val Val Thr Ala Ala His Cys Met Tyr Ser Phe Arg Leu Ser  
 245 250 255  
 Arg Leu Ser Ser Trp Arg Val His Ala Gly Leu Val Ser His Gly Ala  
 260 265 270  
 Val Arg Gln His Gln Gly Thr Met Val Glu Lys Ile Ile Pro His Pro  
 275 280 285  
 Leu Tyr Ser Ala Gln Asn His Asp Tyr Asp Val Ala Leu Leu Gln Leu  
 290 295 300  
 Arg Thr Pro Ile Asn Phe Ser Asp Thr Val Gly Ala Val Cys Leu Pro  
 305 310 315 320  
 Ala Lys Glu Gln Tyr Phe Pro Trp Gly Ser Gln Cys Trp Val Ser Gly  
 325 330 335  
 Trp Gly His Thr Asp Pro Ser His Thr His Ser Ser Asp Thr Leu Gln  
 340 345 350  
 Asp Thr Met Val Pro Leu Leu Ser Thr His Leu Cys Asn Ser Ser Cys  
 355 360 365  
 Met Tyr Ser Gly Ala Leu Thr His Arg Met Leu Cys Ala Gly Tyr Leu  
 370 375 380  
 Asp Gly Arg Ala Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val  
 385 390 395 400  
 Cys Pro Ser Gly Asp Thr Trp His Leu Val Gly Val Val Ser Trp Gly  
 405 410 415  
 Arg Gly Cys Ala Glu Pro Asn Arg Pro Gly Val Tyr Ala Lys Val Ala  
 420 425 430  
 Glu Phe Leu Asp Trp Ile His Asp Thr Val Gln Val Arg  
 435 440 445

<210> 74  
 <211> 398

<212> PRT

<213> Homo sapiens

<400> 74

Met	Ser	Leu	Met	Leu	Asp	Asp	Gln	Pro	Pro	Met	Glu	Ala	Gln	Tyr	Ala	
1				5					10					15		
Glu	Glu	Gly	Pro	Gly	Pro	Gly	Ile	Phe	Arg	Ala	Glu	Pro	Gly	Asp	Gln	
			20					25					30			
Gln	His	Pro	Ile	Ser	Gln	Ala	Val	Cys	Trp	Arg	Ser	Met	Arg	Arg	Gly	
		35					40					45				
Cys	Ala	Val	Leu	Gly	Ala	Leu	Gly	Leu	Leu	Ala	Gly	Ala	Gly	Val	Gly	
	50					55					60					
Ser	Trp	Leu	Leu	Val	Leu	Tyr	Leu	Cys	Pro	Ala	Ala	Ser	Gln	Pro	Ile	
65					70					75					80	
Ser	Gly	Thr	Leu	Gln	Asp	Glu	Glu	Ile	Thr	Leu	Ser	Cys	Ser	Glu	Ala	
				85					90					95		
Ser	Ala	Glu	Glu	Ala	Leu	Leu	Pro	Ala	Leu	Pro	Lys	Thr	Val	Ser	Phe	
			100					105					110			
Arg	Ile	Asn	Ser	Glu	Asp	Phe	Leu	Leu	Glu	Ala	Gln	Val	Arg	Asp	Gln	
		115					120					125				
Pro	Arg	Trp	Leu	Leu	Val	Cys	His	Glu	Gly	Trp	Ser	Pro	Ala	Leu	Gly	
	130					135					140					
Leu	Gln	Ile	Cys	Trp	Ser	Leu	Gly	His	Leu	Arg	Leu	Thr	His	His	Lys	
145					150					155					160	
Gly	Val	Asn	Leu	Thr	Asp	Ile	Lys	Leu	Asn	Ser	Ser	Gln	Glu	Phe	Ala	
				165					170					175		
Gln	Leu	Ser	Pro	Arg	Leu	Gly	Gly	Phe	Leu	Glu	Glu	Ala	Trp	Gln	Pro	
			180					185					190			
Arg	Asn	Asn	Cys	Thr	Ser	Gly	Gln	Val	Val	Ser	Leu	Arg	Cys	Ser	Glu	
		195					200					205				
Cys	Gly	Ala	Arg	Pro	Leu	Ala	Ser	Arg	Ile	Val	Gly	Gly	Gln	Ser	Val	
	210					215					220					
Ala	Pro	Gly	Arg	Trp	Pro	Trp	Gln	Ala	Ser	Val	Ala	Leu	Gly	Phe	Arg	
225					230					235				240		
His	Thr	Cys	Gly	Gly	Ser	Val	Leu	Ala	Pro	Arg	Trp	Val	Val	Thr	Ala	
				245					250					255		
Ala	His	Cys	Met	His	Ser	Phe	Arg	Leu	Ala	Arg	Leu	Ser	Ser	Trp	Arg	
			260					265					270			
Val	His	Ala	Gly	Leu	Val	Ser	His	Ser	Ala	Val	Arg	Pro	His	Gln	Gly	
			275				280					285				

Ala Leu Val Glu Arg Ile Ile Pro His Pro Leu Tyr Ser Ala Gln Asn  
 290 295 300  
 His Asp Tyr Asp Val Ala Leu Leu Arg Leu Gln Thr Ala Leu Asn Phe  
 305 310 315 320  
 Ser Asp Thr Val Gly Ala Val Cys Leu Pro Ala Lys Glu Gln His Phe  
 325 330 335  
 Pro Lys Gly Ser Arg Cys Trp Val Ser Gly Trp Gly His Thr His Pro  
 340 345 350  
 Ser His Ser Leu Gln Leu Gly Tyr Ala Pro Gly His Gly Gly Ala Leu  
 355 360 365  
 Val Gln His Ser Ala Leu Gln Gln Leu Leu Arg Val Gln Arg Ser Pro  
 370 375 380  
 His Pro Pro His Ala Leu Arg Trp Leu Pro Gly Arg Lys Gly  
 385 390 395  
  
 <210> 75  
 <211> 311  
 <212> PRT  
 <213> Mus musculus  
  
 <400> 75  
 Met His Ile Cys Lys Ser Leu Gly His Ile Arg Leu Thr Gln His Lys  
 1 5 10 15  
 Ala Val Asn Leu Ser Asp Ile Lys Leu Asn Arg Ser Gln Glu Phe Ala  
 20 25 30  
 Gln Leu Ser Ala Arg Pro Gly Gly Leu Val Glu Glu Ala Trp Lys Pro  
 35 40 45  
 Ser Ala Asn Cys Pro Ser Gly Arg Ile Val Ser Leu Lys Cys Ser Glu  
 50 55 60  
 Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile Val Gly Gly Gln Ala Val  
 65 70 75 80  
 Ala Ser Gly Arg Trp Pro Trp Gln Ala Ser Val Met Leu Gly Ser Arg  
 85 90 95  
 His Thr Cys Gly Ala Ser Val Leu Ala Pro His Trp Val Val Thr Ala  
 100 105 110  
 Ala His Cys Met Tyr Ser Phe Arg Leu Ser Arg Leu Ser Ser Trp Arg  
 115 120 125  
 Val His Ala Gly Leu Val Ser His Gly Ala Val Arg Gln His Gln Gly  
 130 135 140  
 Thr Met Val Glu Lys Ile Ile Pro His Pro Leu Tyr Ser Ala Gln Asn

145		150		155		160
His Asp Tyr Asp Val Ala Leu Leu Gln Leu Arg Thr Pro Ile Asn Phe						
	165			170		175
Ser Asp Thr Val Asp Ala Val Cys Leu Pro Ala Lys Glu Gln Tyr Phe						
	180		185		190	
Pro Trp Gly Ser Gln Cys Trp Val Ser Gly Trp Gly His Thr Asp Pro						
	195		200		205	
Ser His Thr His Ser Ser Asp Thr Leu Gln Asp Thr Met Val Pro Leu						
	210		215		220	
Leu Ser Thr His Leu Cys Asn Ser Ser Cys Met Tyr Ser Gly Ala Leu						
	225		230		235	240
Thr His Arg Met Leu Cys Ala Gly Tyr Leu Asp Gly Arg Ala Asp Ala						
		245		250		255
Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Pro Ser Gly Asp Thr						
	260		265		270	
Trp His Leu Val Gly Val Val Ser Trp Gly Arg Gly Cys Ala Glu Pro						
	275		280		285	
Asn Arg Pro Gly Val Tyr Ala Lys Val Ala Glu Phe Leu Asp Trp Ile						
	290		295		300	
His Asp Thr Val Gln Val Arg						
305		310				

<210> 76

<211> 199

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Reprolysin  
family zinc protease Consensus Sequence

<400> 76

Lys Tyr Ile Glu Leu Phe Ile Val Val Asp His Gly Met Phe Thr Lys
1 5 10 15

Tyr Gly Ser Asp Leu Asn Lys Ile Arg Gln Arg Val His Gln Ile Val
20 25 30

Asn Leu Val Asn Glu Ile Tyr Arg Pro Leu Asn Ile Arg Val Val Leu
35 40 45

Val Gly Leu Glu Ile Trp Ser Asp Gly Asp Lys Ile Thr Val Gln Gly
50 55 60

Asp Ala Asn Asp Thr Leu His Arg Phe Leu Glu Trp Arg Glu Thr Asp
65 70 75 80

Leu Leu Lys Arg Lys Ser His Asp Asn Ala Gln Leu Leu Thr Gly Ile  
                                     85                                    90                                    95  
 Asp Phe Asp Gly Asn Thr Ile Gly Ala Ala Tyr Val Gly Gly Met Cys  
                                     100                                    105                                    110  
 Ser Pro Lys Arg Ser Val Gly Val Val Gln Asp His Ser Pro Ile Val  
                                     115                                    120                                    125  
 Leu Leu Val Ala Val Thr Met Ala His Glu Leu Gly His Asn Leu Gly  
                                     130                                    135                                    140  
 Met Thr His Asp Asp Ile Asn Lys Cys Thr Cys Glu Gly Gly Gly Gly  
                                     145                                    150                                    155                                    160  
 Cys Ile Met Asn Pro Val Ala Ser Ser Ser Pro Gly Lys Lys Phe Ser  
                                     165                                    170                                    175  
 Asn Cys Ser Met Asp Asp Tyr Gln Gln Phe Leu Thr Lys Gly Lys Pro  
                                     180                                    185                                    190  
 Gln Cys Leu Leu Asn Lys Pro  
                                     195

<210> 77

<211> 51

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Thrombospondin  
type 1 Consensus Sequence

<400> 77

Trp Gly Glu Trp Ser Glu Trp Ser Pro Cys Ser Val Thr Cys Gly Gly  
           1                                    5                                    10                                    15

Gly Val Gln Thr Arg Thr Arg Cys Cys Asn Pro Pro Pro Asn Gly Gly  
                                     20                                    25                                    30

Gly Pro Cys Thr Gly Pro Asp Thr Glu Thr Arg Ala Cys Asn Glu Gln  
                                     35                                    40                                    45

Pro Cys Pro  
           50

<210> 78

<211> 48

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Thrombospondin  
type 1 domain Consensus Sequence

<400> 78

Ser Pro Trp Ser Glu Trp Ser Pro Cys Ser Val Thr Cys Gly Lys Gly  
1 5 10 15

Ile Arg Thr Arg Gln Arg Thr Cys Asn Ser Pro Ala Gly Gly Lys Pro  
20 25 30

Cys Thr Gly Asp Ala Gln Glu Thr Glu Ala Cys Met Met Asp Pro Cys  
35 40 45

<210> 79

<211> 117

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Reprolysin  
family propeptide Consensus Sequence

<400> 79

His Leu Glu Lys Asn Arg Ser Leu Leu Ala Pro Asp Phe Thr Val Thr  
1 5 10 15

Thr Tyr Asp Asp Asp Gly Thr Leu Val Thr Glu His Pro Leu Ile Gln  
20 25 30

Asp His Cys Tyr Tyr Gln Gly Tyr Val Glu Gly Tyr Pro Asn Ser Ala  
35 40 45

Val Ser Leu Ser Thr Cys Ser Gly Leu Arg Gly Ile Leu Gln Leu Glu  
50 55 60

Asn Leu Ser Tyr Gly Ile Glu Pro Leu Glu Ser Ser Asp Gly Phe Glu  
65 70 75 80

His Ile Ile Tyr Gln Ile Glu His Leu Lys Thr Val Pro Gly Pro Cys  
85 90 95

Gly Glu Cys Gly Ser Leu Ser Val Ser Thr Asp Ser Gln Tyr Gly Ile  
100 105 110

Arg Ser Pro Ser Pro  
115

<210> 80

<211> 751

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

# Alpha-2-macroglobulin family Consensus Sequence

<400> 80

Ile Asp Glu Asp Asp Ile Thr Ile Arg Ser Tyr Phe Pro Glu Ser Trp  
1 5 10 15

Leu Trp Glu Val Glu Glu Val Asp Arg Ser Pro Val Leu Thr Val Asn  
20 25 30

Ile Thr Leu Pro Asp Ser Ile Thr Thr Trp Glu Ile Leu Ala Val Ser  
35 40 45

Leu Ser Asn Thr Lys Gly Leu Cys Val Ala Asp Pro Val Glu Leu Thr  
50 55 60

Val Phe Gln Asp Phe Phe Leu Glu Leu Arg Leu Pro Tyr Ser Val Val  
65 70 75 80

Arg Gly Glu Gln Val Glu Leu Arg Ala Val Leu Tyr Asn Tyr Leu Pro  
85 90 95

Ser Gln Asp Ile Lys Val Val Val Gln Leu Glu Val Glu Pro Leu Cys  
100 105 110

Gln Ala Gly Phe Cys Ser Leu Ala Thr Gln Arg Thr Arg Ser Ser Gln  
115 120 125

Ser Val Arg Pro Lys Ser Leu Ser Ser Val Ser Phe Pro Val Val Val  
130 135 140

Val Pro Leu Ala Ser Gly Leu Ser Leu Val Glu Val Val Ala Ser Val  
145 150 155 160

Pro Glu Phe Phe Val Lys Asp Ala Val Val Lys Thr Leu Lys Val Glu  
165 170 175

Pro Glu Gly Ala Arg Lys Glu Glu Thr Val Ser Ser Leu Leu Leu Pro  
180 185 190

Pro Glu His Leu Gly Gly Gly Leu Glu Val Ser Glu Val Pro Ala Leu  
195 200 205

Lys Leu Pro Asp Asp Val Pro Asp Thr Glu Ala Glu Ala Val Ile Ser  
210 215 220

Val Gln Gly Asp Pro Val Ala Gln Ala Ile Gln Asn Thr Leu Ser Gly  
225 230 235 240

Glu Gly Leu Asn Asn Leu Leu Arg Leu Pro Ser Gly Cys Gly Glu Gln  
245 250 255

Asn Met Ile Tyr Met Ala Pro Thr Val Tyr Val Leu His Tyr Leu Asp  
260 265 270

Glu Thr Trp Gln Trp Glu Lys Pro Gly Thr Lys Lys Lys Gln Lys Ala  
275 280 285



Ile	Asp	Leu	Ile	Asn	Lys	Gly	Tyr	Gln	Arg	Gln	Leu	Asn	Tyr	Arg	Lys	290	295	300	
Ala	Asp	Gly	Ser	Tyr	Ala	Ala	Phe	Leu	His	Arg	Ala	Ser	Ser	Thr	Trp	305	310	315	320
Leu	Thr	Ala	Phe	Val	Leu	Lys	Val	Phe	Ser	Gln	Ala	Arg	Asn	Tyr	Val	325	330	335	
Phe	Ile	Asp	Glu	Glu	His	Ile	Cys	Gly	Ala	Val	Lys	Trp	Leu	Ile	Leu	340	345	350	
Asn	Gln	Gln	Lys	Asp	Asp	Gly	Val	Phe	Arg	Glu	Ser	Gly	Pro	Val	Ile	355	360	365	
His	Asn	Glu	Met	Lys	Gly	Gly	Val	Gly	Asp	Asp	Ala	Glu	Val	Glu	Val	370	375	380	
Thr	Leu	Thr	Ala	Phe	Ile	Thr	Ile	Ala	Leu	Leu	Glu	Ala	Lys	Leu	Val	385	390	395	400
Cys	Ile	Ser	Pro	Val	Val	Ala	Asn	Ala	Leu	Ser	Ile	Leu	Lys	Ala	Ser	405	410	415	
Asp	Tyr	Leu	Leu	Glu	Asn	Tyr	Ala	Asn	Gly	Gln	Arg	Val	Tyr	Thr	Leu	420	425	430	
Ala	Leu	Thr	Ala	Tyr	Ala	Leu	Ala	Leu	Ala	Gly	Val	Leu	His	Lys	Leu	435	440	445	
Lys	Glu	Ile	Leu	Lys	Ser	Leu	Lys	Glu	Glu	Leu	Tyr	Lys	Ala	Leu	Val	450	455	460	
Lys	Gly	His	Trp	Glu	Arg	Pro	Gln	Lys	Pro	Lys	Asp	Ala	Pro	Gly	His	465	470	475	480
Pro	Tyr	Ser	Pro	Gln	Pro	Gln	Ala	Ala	Ala	Val	Glu	Met	Thr	Ser	Tyr	485	490	495	
Ala	Leu	Leu	Ala	Leu	Leu	Thr	Leu	Leu	Pro	Phe	Pro	Lys	Val	Glu	Met	500	505	510	
Ala	Pro	Lys	Val	Val	Lys	Trp	Leu	Thr	Glu	Gln	Gln	Tyr	Tyr	Gly	Gly	515	520	525	
Gly	Phe	Gly	Ser	Thr	Gln	Asp	Thr	Val	Met	Ala	Leu	Gln	Ala	Leu	Ser	530	535	540	
Lys	Tyr	Gly	Ile	Ala	Thr	Pro	Thr	His	Lys	Glu	Lys	Asn	Leu	Ser	Val	545	550	555	560
Thr	Ile	Gln	Ser	Pro	Ser	Gly	Ser	Phe	Lys	Ser	His	Phe	Gln	Ile	Leu	565	570	575	
Asn	Asn	Asn	Ala	Phe	Leu	Leu	Arg	Pro	Val	Glu	Leu	Pro	Leu	Asn	Glu	580	585	590	

Gly Phe Thr Val Thr Ala Lys Val Thr Gly Gln Gly Thr Leu Thr Leu  
 595 600 605  
 Val Thr Thr Tyr Arg Tyr Lys Val Leu Asp Lys Lys Asn Thr Phe Cys  
 610 615 620  
 Phe Asp Leu Lys Ile Glu Thr Val Pro Asp Thr Cys Val Glu Pro Lys  
 625 630 635 640  
 Gly Ala Lys Asn Ser Asp Tyr Leu Ser Ile Cys Thr Arg Tyr Ala Gly  
 645 650 655  
 Ser Arg Ser Asp Ser Gly Met Ala Ile Ala Asp Ile Ser Met Leu Thr  
 660 665 670  
 Gly Phe Ile Pro Leu Lys Pro Asp Leu Lys Lys Leu Glu Asn Gly Val  
 675 680 685  
 Asp Arg Tyr Val Ser Lys Tyr Glu Ile Asp Gly Asn His Val Leu Leu  
 690 695 700  
 Tyr Leu Asp Lys Val Ser His Ser Glu Thr Glu Cys Val Gly Phe Lys  
 705 710 715 720  
 Ile His Gln Asp Phe Glu Val Gly Leu Leu Gln Pro Ala Ser Val Lys  
 725 730 735  
 Val Tyr Asp Tyr Tyr Glu Pro Asp Glu Gln Cys Thr Ala Phe Tyr  
 740 745 750

<210> 81  
 <211> 620  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:  
 Alpha-2-macroglobulin family N-terminal region  
 Consensus Sequence

<400> 81  
 Arg Leu Leu Trp Leu Leu Leu Leu Leu Leu Phe Phe Asp Ser Ser  
 1 5 10 15  
 Leu Gln Lys Pro Arg Tyr Met Val Ile Val Pro Ser Ile Leu Arg Thr  
 20 25 30  
 Glu Thr Pro Glu Lys Val Cys Val Gln Leu His Asp Leu Asn Glu Thr  
 35 40 45  
 Val Thr Val Thr Val Ser Leu His Ser Phe Pro Gly Lys Arg Asn Leu  
 50 55 60  
 Ser Ser Leu Phe Thr Val Leu Leu Ser Ser Lys Asp Leu Phe His Cys  
 65 70 75 80

Val Ser Phe Thr Val Pro Gln Pro Gly Leu Phe Lys Ser Ser Lys Gly  
85 90 95  
Glu Glu Ser Phe Val Val Val Gln Val Lys Gly Pro Thr His Thr Phe  
100 105 110  
Lys Glu Lys Val Thr Val Leu Val Ser Ser Arg Arg Gly Leu Val Phe  
115 120 125  
Ile Gln Thr Asp Lys Pro Ile Tyr Thr Pro Gly Gln Thr Val Arg Tyr  
130 135 140  
Arg Val Phe Ser Val Asp Glu Asn Leu Arg Pro Leu Asn Glu Leu Ile  
145 150 155 160  
Leu Val Tyr Ile Glu Asp Pro Glu Gly Asn Arg Val Asp Gln Trp Glu  
165 170 175  
Val Asn Lys Leu Glu Gly Gly Ile Phe Gln Leu Ser Phe Pro Ile Pro  
180 185 190  
Ser Glu Pro Ile Gln Gly Thr Trp Lys Ile Val Ala Arg Tyr Glu Ser  
195 200 205  
Gly Pro Glu Ser Asn Tyr Thr His Tyr Phe Glu Val Lys Glu Tyr Val  
210 215 220  
Leu Pro Ser Phe Glu Val Ser Ile Thr Pro Pro Lys Pro Phe Ile Tyr  
225 230 235 240  
Tyr Asp Asn Phe Lys Glu Phe Glu Val Thr Ile Cys Ala Arg Tyr Thr  
245 250 255  
Tyr Gly Lys Pro Val Pro Gly Val Ala Tyr Val Arg Phe Gly Val Lys  
260 265 270  
Asp Glu Asp Gly Lys Lys Glu Leu Leu Ala Gly Leu Glu Glu Arg Ala  
275 280 285  
Lys Leu Leu Asp Gly Asn Gly Glu Ile Cys Leu Ser Gln Glu Val Leu  
290 295 300  
Leu Lys Glu Leu Gln Leu Lys Asn Glu Asp Leu Glu Gly Lys Ser Leu  
305 310 315 320  
Tyr Val Ala Val Ala Val Ile Glu Ser Glu Gly Gly Asp Met Glu Glu  
325 330 335  
Ala Glu Leu Gly Gly Ile Lys Ile Val Arg Ser Pro Tyr Lys Leu Lys  
340 345 350  
Phe Val Lys Thr Pro Ser His Phe Lys Pro Gly Ile Pro Phe Phe Leu  
355 360 365  
Lys Val Leu Val Val Asp Pro Asp Gly Ser Pro Ala Pro Asn Val Pro  
370 375 380

Val Lys Val Ser Ala Gln Asp Ala Ser Tyr Tyr Ser Asn Gly Thr Thr  
 385 390 395 400  
 Asp Glu Asp Gly Leu Ala Gln Phe Ser Ile Asn Thr Ser Gly Ile Ser  
 405 410 415  
 Ser Leu Ser Ile Thr Val Arg Thr Asn His Lys Glu Leu Pro Glu Glu  
 420 425 430  
 Val Gln Ala His Ala Glu Ala Gln Ala Thr Ala Tyr Ser Thr Val Ser  
 435 440 445  
 Leu Ser Lys Ser Tyr Ile His Leu Ser Ile Glu Arg Thr Leu Pro Cys  
 450 455 460  
 Gly Pro Gly Val Gly Glu Gln Ala Asn Phe Ile Leu Arg Gly Lys Ser  
 465 470 475 480  
 Leu Gly Glu Leu Lys Ile Leu His Phe Tyr Tyr Leu Ile Met Ser Lys  
 485 490 495  
 Gly Lys Ile Val Lys Thr Gly Arg Glu Pro Arg Glu Pro Gly Gln Gly  
 500 505 510  
 Leu Phe Ser Leu Ser Ile Pro Val Thr Pro Asp Leu Ala Pro Ser Phe  
 515 520 525  
 Arg Leu Val Ala Tyr Tyr Ile Leu Pro Gln Gly Glu Val Val Ala Asp  
 530 535 540  
 Ser Val Trp Ile Asp Val Glu Asp Cys Cys Ala Asn Lys Leu Asp Leu  
 545 550 555 560  
 Ser Phe Ser Pro Ser Lys Asp Tyr Arg Leu Pro Ala Gln Gln Val Lys  
 565 570 575  
 Leu Arg Val Glu Ala Asp Pro Gln Ser Leu Val Ala Leu Arg Ala Val  
 580 585 590  
 Asp Gln Ala Val Tyr Leu Leu Lys Pro Lys Ala Lys Leu Ser Met Ser  
 595 600 605  
 Lys Val Tyr Asp Leu Leu Glu Lys Ser Asp Leu Gly  
 610 615 620

<210> 82

<211> 186

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Sodium Bile  
acid symporter family consensus sequence

<400> 82

Ala Leu Gly Leu Phe Leu Met Met Phe Ser Met Gly Leu Lys Val Arg

1	5	10	15
Phe Glu Asp Leu Lys Glu Ala Leu Arg Arg Pro Lys Ala Leu Ile Leu	20	25	30
Gly Leu Leu Leu Gln Trp Ile Ile Met Pro Leu Leu Met Phe Ile Leu	35	40	45
Ala Trp Leu Leu Leu Arg Leu Pro Pro Glu Leu Ala Thr Gly Leu Ile	50	55	60
Leu Val Gly Cys Ala Pro Gly Gly Ala Met Ser Asn Val Trp Thr Tyr	65	70	75
Leu Ala Lys Gly Asp Val Glu Leu Ser Val Val Met Val Ala Leu Ser	85	90	95
Thr Leu Leu Ala Pro Leu Val Thr Pro Leu Leu Ser Phe Leu Leu Ala	100	105	110
Gly Leu Leu Val His Val Asp Ala Val Ser Pro Trp Ser Leu Ile Lys	115	120	125
Ser Val Leu Val Tyr Val Ile Ile Pro Leu Ile Ala Gly Met Leu Thr	130	135	140
Arg Tyr Phe Leu Pro Glu Trp Phe Glu Gln Arg Val Leu Pro Val Leu	145	150	155
Ser Pro Ile Ser Leu Ile Gly Leu Leu Leu Thr Ile Val Val Ile Phe	165	170	175
Ala Leu Asn Gly Glu Val Ile Ala Ser Leu	180	185	

<210> 83

<211> 191

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: SPFH  
domain/Band 7 family Consensus Sequence

<400> 83

Val Ala Leu Leu Ile Ile Ile Ala Leu Val Val Ile Ala Met Ser Val	1	5	10	15
Lys Ile Val Lys Glu Tyr Glu Arg Gly Val Ile Phe Arg Leu Gly Arg	20	25	30	
Tyr Val Arg Gln Val Val Gly Pro Gly Leu His Phe Ile Ile Pro Phe	35	40	45	
Ile Asp Thr Val Lys Lys Val Asp Leu Arg Thr Val Val Tyr Asp Val	50	55	60	

Pro Ser Gln Glu Ile Ile Thr Lys Asp Asn Val Val Val Ile Val Asp  
 65 70 75 80  
 Ala Val Val Tyr Tyr Arg Val Val Asp Pro Leu Lys Ala Val Tyr Glu  
 85 90 95  
 Val Glu Asp Ala Glu Arg Ala Leu Pro Gln Leu Ala Gln Thr Thr Leu  
 100 105 110  
 Arg Asn Val Ile Gly Gln Phe Thr Leu Asp Glu Ile Leu Thr Glu Arg  
 115 120 125  
 Glu Arg Ile Asn Ser Gln Leu Arg Glu Ile Leu Asp Glu Ala Thr Asp  
 130 135 140  
 Pro Trp Gly Ile Lys Val Glu Arg Val Glu Ile Lys Asp Ile Arg Leu  
 145 150 155 160  
 Pro Glu Glu Val Gln Arg Ala Met Ala Ala Gln Met Glu Ala Glu Arg  
 165 170 175  
 Glu Ala Arg Ala Lys Ile Leu Glu Ala Glu Gly Glu Gln Glu Ala  
 180 185 190

<210> 84  
 <211> 160  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Prohibitin  
 homologues Consensus Sequence

<400> 84  
 Ala Ala Phe Tyr Val Ile Gly Glu Gly Glu Arg Gly Val Val Glu Arg  
 1 5 10 15  
 Leu Gly Arg Val Leu Lys Val Leu Gly Pro Gly Leu His Phe Val Ile  
 20 25 30  
 Pro Phe Ile Asp Asp Val Lys Arg Val Asp Leu Arg Ala Gln Thr Asp  
 35 40 45  
 Asp Val Pro Pro Gln Glu Val Ile Thr Lys Asp Asn Val Thr Val Ser  
 50 55 60  
 Val Asp Ala Val Val Tyr Tyr Arg Val Leu Asp Pro Leu Lys Ala Val  
 65 70 75 80  
 Tyr Gly Val Leu Asp Ala Asp Tyr Arg Ala Leu Arg Gln Leu Ala Gln  
 85 90 95  
 Thr Thr Leu Arg Ser Val Ile Gly Lys Arg Thr Leu Asp Glu Leu Leu  
 100 105 110

Thr Asp Glu Arg Glu Lys Ile Ser Glu Asn Ile Arg Glu Glu Leu Asn  
115 120 125

Glu Ala Ala Glu Pro Trp Gly Ile Glu Val Glu Asp Val Glu Ile Lys  
130 135 140

Asp Ile Arg Leu Pro Glu Glu Ile Lys Glu Ala Met Glu Ala Gln Gln  
145 150 155 160

<210> 85  
<211> 79  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Kringle domain  
Consensus Sequence

<400> 85  
Cys Tyr His Gly Asn Gly Glu Asn Tyr Arg Gly Thr Ala Ser Thr Thr  
1 5 10 15

Glu Ser Gly Ala Pro Cys Gln Arg Trp Asp Ser Gln Thr Pro His Arg  
20 25 30

His Ser Lys Tyr Thr Pro Glu Arg Tyr Pro Ala Lys Gly Leu Gly Glu  
35 40 45

Asn Tyr Cys Arg Asn Pro Asp Gly Asp Glu Arg Pro Trp Cys Tyr Thr  
50 55 60

Thr Asp Pro Arg Val Arg Trp Glu Tyr Cys Asp Ile Pro Arg Cys  
65 70 75

<210> 86  
<211> 83  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Kringle domain  
Consensus Sequence

<400> 86  
Arg Asp Cys Tyr Ala Gly Asn Gly Glu Ser Tyr Arg Gly Thr Ala Ser  
1 5 10 15

Thr Thr Lys Ser Gly Lys Pro Cys Gln Arg Trp Asp Ser Gln Thr Pro  
20 25 30

His Leu His Arg Phe Thr Pro Glu Arg Phe Pro Glu Leu Gly Leu Glu  
35 40 45

His Asn Tyr Cys Arg Asn Pro Asp Gly Asp Ser Glu Gly Pro Trp Cys  
 50 55 60

Tyr Thr Thr Asp Pro Asn Val Arg Trp Glu Tyr Cys Asp Ile Pro Gln  
 65 70 75 80

Cys Glu Ser

<210> 87

<211> 230

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Trypsin-like  
 serine protease Consensus Sequence

<400> 87

Arg Ile Val Gly Gly Ser Glu Ala Asn Ile Gly Ser Phe Pro Trp Gln  
 1 5 10 15

Val Ser Leu Gln Tyr Arg Gly Gly Arg His Phe Cys Gly Gly Ser Leu  
 20 25 30

Ile Ser Pro Arg Trp Val Leu Thr Ala Ala His Cys Val Tyr Gly Ser  
 35 40 45

Ala Pro Ser Ser Ile Arg Val Arg Leu Gly Ser His Asp Leu Ser Ser  
 50 55 60

Gly Glu Glu Thr Gln Thr Val Lys Val Ser Lys Val Ile Val His Pro  
 65 70 75 80

Asn Tyr Asn Pro Ser Thr Tyr Asp Asn Asp Ile Ala Leu Leu Lys Leu  
 85 90 95

Ser Glu Pro Val Thr Leu Ser Asp Thr Val Arg Pro Ile Cys Leu Pro  
 100 105 110

Ser Ser Gly Tyr Asn Val Pro Ala Gly Thr Thr Cys Thr Val Ser Gly  
 115 120 125

Trp Gly Arg Thr Ser Glu Ser Ser Gly Ser Leu Pro Asp Thr Leu Gln  
 130 135 140

Glu Val Asn Val Pro Ile Val Ser Asn Ala Thr Cys Arg Arg Ala Tyr  
 145 150 155 160

Ser Gly Gly Pro Ala Ile Thr Asp Asn Met Leu Cys Ala Gly Gly Leu  
 165 170 175

Glu Gly Gly Lys Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val  
 180 185 190



Cys Asn Asp Pro Arg Trp Val Leu Val Gly Ile Val Ser Trp Gly Ser  
 195 200 205

Tyr Gly Cys Ala Arg Pro Asn Lys Pro Gly Val Tyr Thr Arg Val Ser  
 210 215 220

Ser Tyr Leu Asp Trp Ile  
 225 230

<210> 88  
 <211> 217  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Trypsin  
 Consensus Sequence

<400> 88  
 Ile Val Gly Gly Arg Glu Ala Gln Ala Gly Ser Phe Pro Trp Gln Val  
 1 5 10 15

Ser Leu Gln Val Ser Ser Gly His Phe Cys Gly Gly Ser Leu Ile Ser  
 20 25 30

Glu Asn Trp Val Leu Thr Ala Ala His Cys Val Ser Gly Ala Ser Ser  
 35 40 45

Val Arg Val Val Leu Gly Glu His Asn Leu Gly Thr Thr Glu Gly Thr  
 50 55 60

Glu Gln Lys Phe Asp Val Lys Lys Ile Ile Val His Pro Asn Tyr Asn  
 65 70 75 80

Pro Asp Thr Asn Asp Ile Ala Leu Leu Lys Leu Lys Ser Pro Val Thr  
 85 90 95

Leu Gly Asp Thr Val Arg Pro Ile Cys Leu Pro Ser Ala Ser Ser Asp  
 100 105 110

Leu Pro Val Gly Thr Thr Cys Ser Val Ser Gly Trp Gly Arg Thr Lys  
 115 120 125

Asn Leu Gly Thr Ser Asp Thr Leu Gln Glu Val Val Val Pro Ile Val  
 130 135 140

Ser Arg Glu Thr Cys Arg Ser Ala Tyr Gly Gly Thr Val Thr Asp Thr  
 145 150 155 160

Met Ile Cys Ala Gly Ala Leu Gly Gly Lys Asp Ala Cys Gln Gly Asp  
 165 170 175

Ser Gly Gly Pro Leu Val Cys Ser Asp Gly Glu Leu Val Gly Ile Val  
 180 185 190

Ser Trp Gly Tyr Gly Cys Ala Val Gly Asn Tyr Pro Gly Val Tyr Thr

195	200	205
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Arg Val Ser Arg Tyr Leu Asp Trp Ile  
210 215

<210> 89  
<211> 79  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Divergent  
subfamily of APPLE domains Consensus Sequence

<400> 89  
Lys Ser Asp Asp Cys Phe Val Arg Leu Pro Asn Thr Lys Leu Pro Asp  
1 5 10 15  
Phe Ser Pro Ile Val Ile Ser Val Ala Ser Leu Glu Glu Cys Ala Gln  
20 25 30  
Lys Cys Leu Asn Ser Asn Cys Ser Cys Arg Ser Phe Thr Tyr Asn Asn  
35 40 45  
Asp Thr Lys Gly Cys Leu Leu Trp Ser Glu Ser Ser Leu Gly Asp Ala  
50 55 60  
Arg Gln Leu Leu Pro Ser Gly Gly Val Asp Tyr Tyr Glu Lys Ile  
65 70 75

<210> 90  
<211> 145  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:  
Lipocalin/cytosolic fatty-acid binding protein  
family Consensus Sequence

<400> 90  
Lys Phe Ala Gly Lys Trp Tyr Leu Val Ala Ser Ala Asn Phe Asp Pro  
1 5 10 15  
Glu Leu Lys Glu Glu Leu Gly Val Leu Glu Ala Thr Arg Lys Glu Ile  
20 25 30  
Thr Pro Leu Lys Glu Gly Asn Leu Glu Ile Val Phe Asp Gly Asp Lys  
35 40 45  
Asn Gly Ile Cys Glu Glu Thr Phe Gly Lys Leu Glu Lys Thr Lys Lys  
50 55 60  
Leu Gly Val Glu Phe Asp Tyr Tyr Thr Gly Asp Asn Arg Phe Val Val  
65 70 75 80

Leu Asp Thr Asp Tyr Asp Asn Tyr Leu Leu Val Cys Val Gln Lys Gly  
85 90 95

Asp Gly Asn Glu Thr Ser Arg Thr Ala Glu Leu Tyr Gly Arg Thr Pro  
100 105 110

Glu Leu Ser Pro Glu Ala Leu Glu Leu Phe Glu Thr Ala Thr Lys Glu  
115 120 125

Leu Gly Ile Pro Glu Asp Asn Val Val Cys Thr Arg Gln Thr Glu Arg  
130 135 140

Cys  
145

<210> 91

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Connexin  
Consensus Sequence

<400> 91

Met Asp Trp Ser Phe Leu Gly Arg Leu Leu Glu Gly Val Asn Lys His  
1 5 10 15

Ser Thr Ala Ile Gly Lys Ile Trp Leu Ser Val Leu Phe Ile Phe Arg  
20 25 30

Ile Leu Val Leu Gly Val Ala Ala Glu Ser Val Trp Gly Asp Glu Gln  
35 40 45

Ser Asp Phe Val Cys Asn Thr Gln Gln Pro Gly Cys Glu Asn Val Cys  
50 55 60

Tyr Asp Gln Phe Phe Pro Ile Ser His Val Arg Leu Trp Val Leu Gln  
65 70 75 80

Leu Ile Phe Val Ser Thr Pro Ser Leu Leu Tyr Leu Gly His Val Ala  
85 90 95

Tyr Arg Val Arg Arg Glu Glu Lys Leu Arg Glu Lys Glu Glu Glu His  
100 105 110

Ser Lys Gly Leu Tyr Ser Glu Glu Ala Lys Lys Arg Cys Gly Ser Glu  
115 120 125

Asp Gly Lys Val Arg Ile Arg Gly Gly Leu Trp Trp Thr Tyr Val Phe  
130 135 140

Ser Ile Ile Phe Lys Ser Ile Phe Glu Val Gly Phe Leu Tyr Gly Gln  
145 150 155 160

Tyr Leu Leu Tyr Gly Phe Thr Met Ser Pro Leu Val Val Cys Ser Arg  
165 170 175

Ala Pro Cys Pro His Thr Val Asp Cys Phe Val Ser Arg Pro Thr Glu  
180 185 190

Lys Thr Ile Phe Ile Val Phe Met Leu Val Val Ser Ala Ile Cys Leu  
195 200 205

Leu Leu Asn Leu Ala Glu Leu Phe Tyr Leu  
210 215

<210> 92

<211> 59

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Src homology 3  
domains Consensus Sequence

<400> 92

Glu Gly Pro Gln Val Arg Ala Leu Tyr Asp Tyr Thr Ala Gln Asp Pro  
1 5 10 15

Asp Glu Leu Ser Phe Lys Lys Gly Asp Ile Ile Thr Val Leu Glu Lys  
20 25 30

Ser Asp Asp Gly Trp Trp Lys Gly Arg Leu Gly Thr Gly Lys Glu Gly  
35 40 45

Leu Phe Pro Ser Asn Tyr Val Glu Glu Ile Asp  
50 55

<210> 93

<211> 57

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: SH3 domain  
Consensus Sequence

<400> 93

Pro Lys Val Val Ala Leu Tyr Asp Tyr Gln Ala Arg Glu Ser Asp Glu  
1 5 10 15

Leu Ser Phe Lys Lys Gly Asp Ile Ile Ile Val Leu Glu Lys Ser Asp  
20 25 30

Asp Gly Gly Trp Trp Lys Gly Arg Leu Lys Gly Thr Lys Glu Gly Leu  
35 40 45

Ile Pro Ser Asn Tyr Val Glu Pro Val  
50 55

<210> 94  
 <211> 91  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Fes/CIP4  
 homology domain Consensus Sequence

<400> 94  
 Met Gly Phe Trp Ser Glu Leu Asp Asp Gly Phe Glu Ala Leu Leu Ser  
 1 5 10 15  
 Arg Leu Lys Asn Gly Leu Arg Leu Leu Glu Asp Leu Lys Lys Phe Met  
 20 25 30  
 Arg Glu Arg Ala Lys Ile Glu Glu Glu Tyr Ala Lys Lys Leu Gln Lys  
 35 40 45  
 Leu Ser Lys Lys Leu Arg Ala Val Arg Asp Thr Glu Ser Glu Leu Gly  
 50 55 60  
 Ser Leu Arg Lys Ala Trp Glu Val Leu Leu Ser Glu Thr Asp Ala Leu  
 65 70 75 80  
 Ala Lys Gln His Leu Gln Leu Ser Glu Asp Leu  
 85 90

<210> 95  
 <211> 94  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Fes/CIP4  
 homology domain Consensus Sequence

<400> 95  
 Met Gly Phe Gly Ser Glu Leu Cys Pro Glu Gly His Lys Ala Leu Leu  
 1 5 10 15  
 Ser Arg Gln Asp Asn Glu Leu Arg Leu Leu Glu Glu Met Lys Lys Phe  
 20 25 30  
 Met Ala Glu Arg Ala Lys Ile Glu Lys Glu Tyr Ala Gly Lys Leu Gln  
 35 40 45  
 His Leu Ser Ala Gln Val Gly Lys Gly Pro Ala Thr Ala Glu Gly Glu  
 50 55 60  
 Asp Glu Leu Ser Ser Leu Lys Ser Trp Ala Val Ile Leu Ser Glu Thr  
 65 70 75 80  
 Glu Gln Gln Ser Lys Ile His Leu Gln Ile Ser Glu Asp Leu

<210> 96  
 <211> 230  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Trypsin-like  
 serine protease Consensus Sequence

<400> 96  
 Arg Ile Val Gly Gly Ser Glu Ala Asn Ile Gly Ser Phe Pro Trp Gln  
 1 5 10 15  
 Val Ser Leu Gln Tyr Arg Gly Gly Arg His Phe Cys Gly Gly Ser Leu  
 20 25 30  
 Ile Ser Pro Arg Trp Val Leu Thr Ala Ala His Cys Val Tyr Gly Ser  
 35 40 45  
 Ala Pro Ser Ser Ile Arg Val Arg Leu Gly Ser His Asp Leu Ser Ser  
 50 55 60  
 Gly Glu Glu Thr Gln Thr Val Lys Val Ser Lys Val Ile Val His Pro  
 65 70 75 80  
 Asn Tyr Asn Pro Ser Thr Tyr Asp Asn Asp Ile Ala Leu Leu Lys Leu  
 85 90 95  
 Ser Glu Pro Val Thr Leu Ser Asp Thr Val Arg Pro Ile Cys Leu Pro  
 100 105 110  
 Ser Ser Gly Tyr Asn Val Pro Ala Gly Thr Thr Cys Thr Val Ser Gly  
 115 120 125  
 Trp Gly Arg Thr Ser Glu Ser Ser Gly Ser Leu Pro Asp Thr Leu Gln  
 130 135 140  
 Glu Val Asn Val Pro Ile Val Ser Asn Ala Thr Cys Arg Arg Ala Tyr  
 145 150 155 160  
 Ser Gly Gly Pro Ala Ile Thr Asp Asn Met Leu Cys Ala Gly Gly Leu  
 165 170 175  
 Glu Gly Gly Lys Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val  
 180 185 190  
 Cys Asn Asp Pro Arg Trp Val Leu Val Gly Ile Val Ser Trp Gly Ser  
 195 200 205  
 Tyr Gly Cys Ala Arg Pro Asn Lys Pro Gly Val Tyr Thr Arg Val Ser  
 210 215 220  
 Ser Tyr Leu Asp Trp Ile  
 225 230

<210> 97  
 <211> 217  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Trypsin  
 Consensus Sequence

<400> 97  
 Ile Val Gly Gly Arg Glu Ala Gln Ala Gly Ser Phe Pro Trp Gln Val  
   1                  5                  10                  15  
 Ser Leu Gln Val Ser Ser Gly His Phe Cys Gly Gly Ser Leu Ile Ser  
           20                  25                  30  
 Glu Asn Trp Val Leu Thr Ala Ala His Cys Val Ser Gly Ala Ser Ser  
       35                  40                  45  
 Val Arg Val Val Leu Gly Glu His Asn Leu Gly Thr Thr Glu Gly Thr  
       50                  55                  60  
 Glu Gln Lys Phe Asp Val Lys Lys Ile Ile Val His Pro Asn Tyr Asn  
   65                  70                  75                  80  
 Pro Asp Thr Asn Asp Ile Ala Leu Leu Lys Leu Lys Ser Pro Val Thr  
                   85                  90                  95  
 Leu Gly Asp Thr Val Arg Pro Ile Cys Leu Pro Ser Ala Ser Ser Asp  
           100                  105                  110  
 Leu Pro Val Gly Thr Thr Cys Ser Val Ser Gly Trp Gly Arg Thr Lys  
       115                  120                  125  
 Asn Leu Gly Thr Ser Asp Thr Leu Gln Glu Val Val Val Pro Ile Val  
       130                  135                  140  
 Ser Arg Glu Thr Cys Arg Ser Ala Tyr Gly Gly Thr Val Thr Asp Thr  
   145                  150                  155                  160  
 Met Ile Cys Ala Gly Ala Leu Gly Gly Lys Asp Ala Cys Gln Gly Asp  
           165                  170                  175  
 Ser Gly Gly Pro Leu Val Cys Ser Asp Gly Glu Leu Val Gly Ile Val  
       180                  185                  190  
 Ser Trp Gly Tyr Gly Cys Ala Val Gly Asn Tyr Pro Gly Val Tyr Thr  
       195                  200                  205  
 Arg Val Ser Arg Tyr Leu Asp Trp Ile  
       210                  215

<210> 98  
 <211> 24

<212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: NOV5 Primer 1  
  
 <400> 98  
 ctcccactcc tgctgcttct gact 24  
  
 <210> 99  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: NOV5 Primer 2  
  
 <400> 99  
 aaggctgggc ctaaccagct ctcac 25  
  
 <210> 100  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: NOV7 Primer 1  
  
 <400> 100  
 catgaactgg gcatttctgc agg 23  
  
 <210> 101  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: NOV7 Primer 2  
  
 <400> 101  
 ttatctgctg atctcgagc ttatgga 27  
  
 <210> 102  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: NOV8 Primer 1  
  
 <400> 102  
 ctgacaggcc ctggtgtgtg at 22



<210> 103  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
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<400> 108  
gcactacaag tggaagcctt ac 22

<210> 109  
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<220>  
<223> Description of Artificial Sequence: Ag4164 Probe

<400> 109  
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<210> 110  
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<220>  
<223> Description of Artificial Sequence: Ag4164 Reverse

<400> 110  
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<210> 111  
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<220>  
<223> Description of Artificial Sequence: Ag1313b  
Forward

<400> 111  
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<210> 112  
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 aaagatggga ctcgtcatga c 21  
  
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<210> 122  
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<400> 123  
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<210> 124  
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<210> 126  
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 Forward  
  
 <400> 132  
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 <400> 133  
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 Reverse  
  
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<400> 135  
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<210> 136  
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<220>  
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<220>  
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<400> 137  
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<210> 138  
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 <223> Description of Artificial Sequence: Ag2432 Forward

<400> 138  
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<210> 139  
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<210> 140  
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<220>  
 <223> Description of Artificial Sequence: Ag2432 Reverse  
  
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 <210> 141  
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 <400> 141  
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 <220>  
 <223> Description of Artificial Sequence: Ag3086 Forward  
  
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 <211> 23

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 <220>  
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 <210> 147  
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 <223> Description of Artificial Sequence: Ag3797 Forward  
  
 <400> 147  
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 <210> 148  
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 <223> Description of Artificial Sequence: Ag3797 Probe  
  
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 <400> 149  
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<210> 150  
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 <400> 150  
 tatcatcact tgtgatggca aa 22  
  
 <210> 151  
 <211> 26  
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 <223> Description of Artificial Sequence: Ag2439 Probe  
  
 <400> 151  
 aaaaccgaga gcactttgaa aacaca 26  
  
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 <400> 152  
 aaacttctct cccagggtac aa 22  
  
 <210> 153  
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 <220>  
 <223> Description of Artificial Sequence: Ag2771 Forward  
  
 <400> 153  
 tgaacagaac tatgcgaaac aa 22  
  
 <210> 154  
 <211> 27  
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<400> 154  
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<210> 155  
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<220>  
 <223> Description of Artificial Sequence: Ag2771 Reverse

<400> 155  
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<210> 156  
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<220>  
 <223> Description of Artificial Sequence: Ag1674 Forward

<400> 156  
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<210> 157  
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<220>  
 <223> Description of Artificial Sequence: Ag1674 Probe

<400> 157  
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<210> 158  
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<220>  
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<400> 158  
 gtctaggaga gagctgagca aa 22

<210> 159  
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 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PAN domain  
Consensus Sequence

<400> 159

Cys Ser Ser Phe Val Arg Val Pro Gly Arg Ser Leu Ser Gly Asn Asp  
1 5 10 15

Ile Ser Val Val Asn Val Pro Ser Leu Glu Glu Cys Ala Ala Leu Cys  
20 25 30

Leu Glu Glu Pro Arg Val Cys Arg Ser Phe Thr Tyr Asn Asn Lys Ser  
35 40 45

Lys Gln Cys Leu Leu Lys Ser Glu Ser Ser Gly Ser Leu Pro Arg Leu  
50 55 60

Lys Arg Pro Ser Gln Lys Val Asp Tyr Tyr Glu Lys Ser Cys  
65 70 75

<210> 160

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Connexin  
homologues Consensus Sequence

<400> 160

Ser Val Trp Gly Asp Glu Gln Ser Asp Phe Thr Cys Asn Thr Gln Gln  
1 5 10 15

Pro Gly Cys Glu Asn Val Cys Tyr Asp Gln Phe Phe Pro Ile Ser His  
20 25 30

Val Arg